符 号 说 明

1．凡数据后有符号“*”，表示光栏位置或其值中间有光栏。

凡数据后有符号“**”，表示原资料中未给此值，此系编者在计算时给定的值。

2．凡没有注明数值单位的，均以毫米为单位；若注明以英寸为单位，则在该镜头资料中均以英寸为单位。

3．常用符号：

ΣS_1	球差系数和；
ΣS_2	彗差系数和；
ΣS_3	象散系数和；
ΣS_4	场曲系数和；
ΣS_5	畸变系数和；
LA'	球差；
$\Delta H'$	绝对畸变；
x_t'	细光束子午场曲；
x_s'	细光束弧矢场曲；
$x_t'-x_s'$	象散；
K_{T_1}'	全口径的子午彗差；
$K_{T_{0.7}}'$	0.707口径的子午彗差；
QP	相对畸变；
HI	理想象高；
E. F. L	焦距；
B. F. L	后截距；
FNo.	相对孔径倒数；
F. A.	视场角；
L_p'	入瞳距离或光栏距 L_p' 下标所示面的距离；
η	物高；
ω	镜头视场。

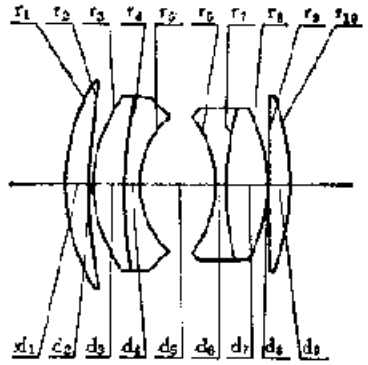
104355

VISIT…

编号：02-00-001

双 高 斯 型 物 镜

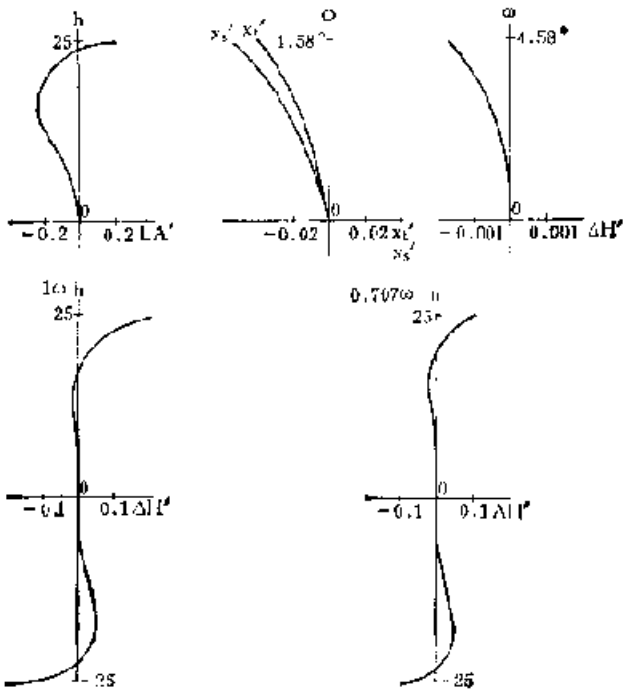
E. F. L＝100　　B. F. L＝72.43　　FNo. ＝2　　F. A. ＝±4.58°**



序号	r	d	n_D	v	序号	r	d	n_D	v
1	54.83	6.71	1.67033	47.2	6	−30.20	3.17	1.69980	34.6
2	156.25	1.27			7	90.18	11.88	1.65844	50.8
3	30.67	8.93	1.69347	53.5	8	−41.87	0.21		
4	168.32	3.52	1.66446	35.9	9	2359.37	5.25	1.74472	44.7
5	25.39	21.21*			10	−77.24			

21.21* = 10.00 + 11.21

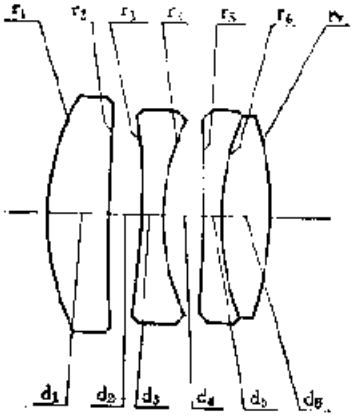
	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.13	0.0051	0.00082	−0.0077	−0.00085	8	−0.02%
h 或 ω %	LA′	AH′	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.2	−0.0017	−0.041	−0.054	0.013	0.029	0.021
70	−0.26	−0.0006	−0.021	−0.027	0.0064	0.021	0.015



编号：02-00-002

摄　影　物　镜

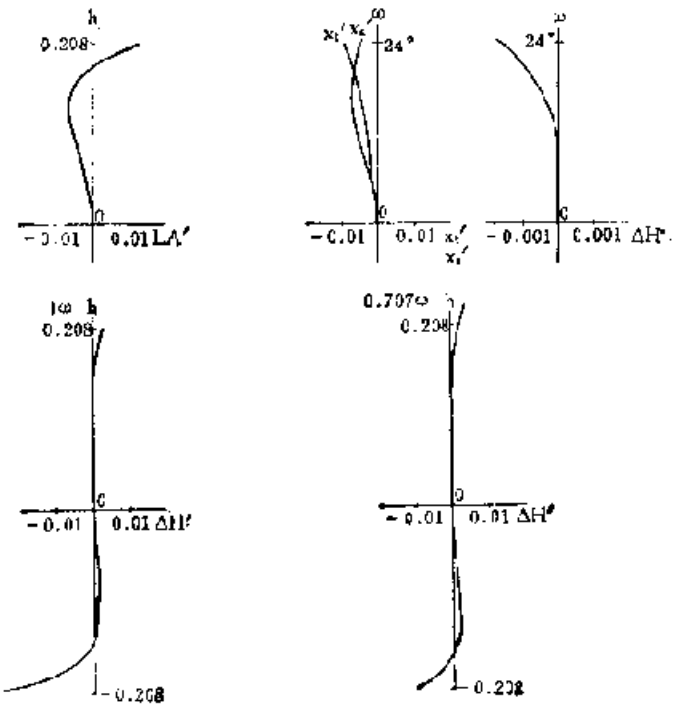
E. F. L＝1　　B. F. L＝0.80566　　FNo. ＝2.4　　F. A. ＝±24°



序号	r	d	n_d	ν_d	序号	r	d	n_d	ν_d
1	0.455042	0.11732	1.78797	47.44	5	−14.149473	0.03355	1.62004	36.31
2	7.882584	0.05729			6	0.492931	0.08778	1.78443	43.77
3	−0.362766	0.03876	1.68893	31.15	7	−0.580024			
4	0.397638	0.07705*							

0.07705* − 0.03000 − 0.04705

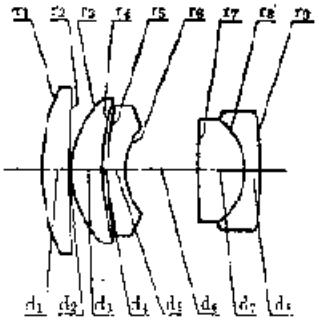
	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.002	0.0006	0.000024	−0.0017	−0.00012	0.43	−0.38%
h 或 ω %	LA′	ΔH′	x'_t	x'_s	$x'_t - x'_s$	K'_{T1}	$K'_{T0.7}$
100	0.012	0.0013	0.0090	0.0043	0.0047	0.018	−0.0019
70	−0.0055	−0.00035	−0.0059	−0.0068	0.00093	−0.0044	0.00025



编号：02-00-003

摄　影　物　镜

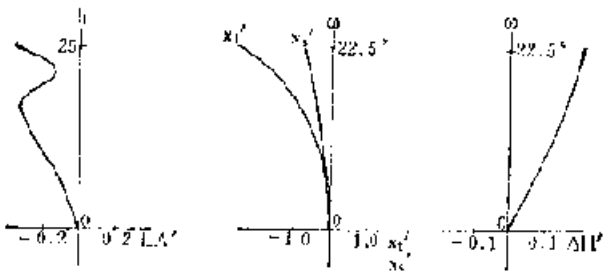
E. F. L＝100　　B. F. L－49.91　　FNo. ＝2　　F. A. ＝±22.5°

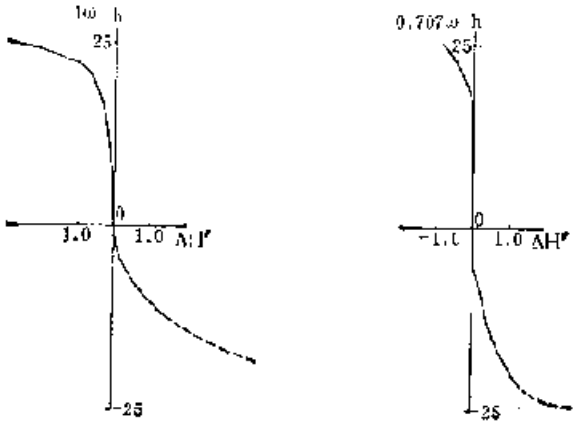


序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	50.82	7.74	1.5688	63.1	6	18.55	21.90*		
2	278.16	0.07			7	379.58	12.61	1.6700	47.1
3	27.83	8.90	1.7015	41.1	8	17.62	4.38	1.6073	49.2
4	61.65	1.00			9	－115.32			
5	83.58	4.88	1.7408	27.7					

21.90* ＝19.00＋2.90

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	－0.20	0.20	－0.075	－0.16	0.36	42.27	0.52%
h或ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K'_{f1}	$K'_{f0.7}$
100	－0.39	0.22	2.71	0.70	2.01		1.81
70	－0.34	0.18	－1.09	－0.65	－0.44	5.46	0.38

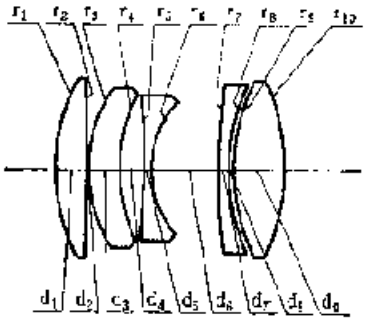




编号：02-00-004

物　　镜

E. F. L＝100　　**B. F. L＝56.18**　　**FNo. ＝2**　　**F. A. ＝±4.58°****

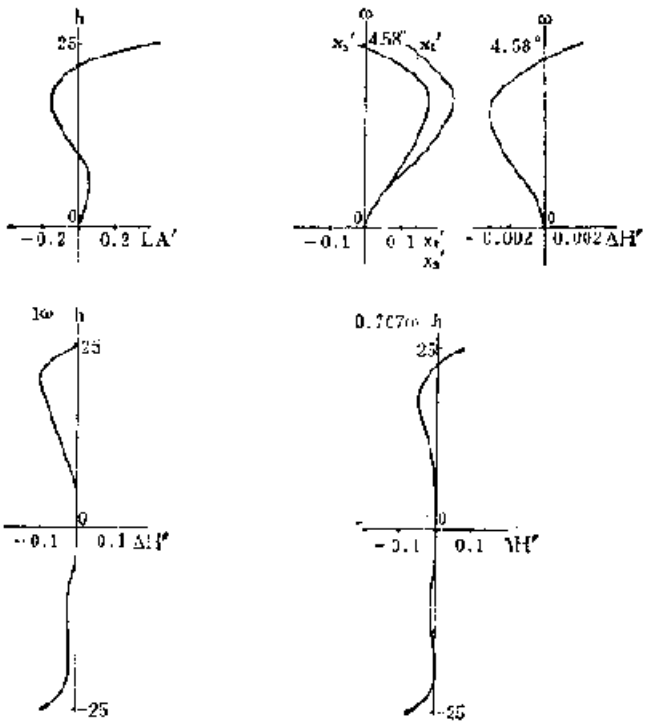


序号	r	d	n_D	ν	序号	r	d	n_d	ν
1	48.57	8.57	1.6068	59.5	6	27.43	19.05*		
2	952.45	0.48			7	200.31	2.85	1.6068	59.5
3	38.10	9.52	1.6068	59.5	8	56.19	0.48		
4	43.19	5.71			9	51.43	14.29	1.6068	59.5
5	−223.83	2.86	1.6477	33.8	10	−56.16			

*19.05 = 10.00 + 9.05

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.16	−0.019	0.0098	−0.013	0.0011	8	0.028%

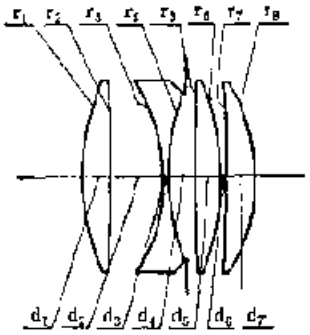
入成ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.45	0.0022	0.113	−0.028	0.138	0.047	0.050
70	−0.17	−0.0036	0.25	0.17	0.075	−0.018	−0.026



编号：02-00-005

摄　影　物　镜

E. F. L＝1　　B. F. L＝0.90，　　FNo. ＝2　　F. A. ＝±4.58°**

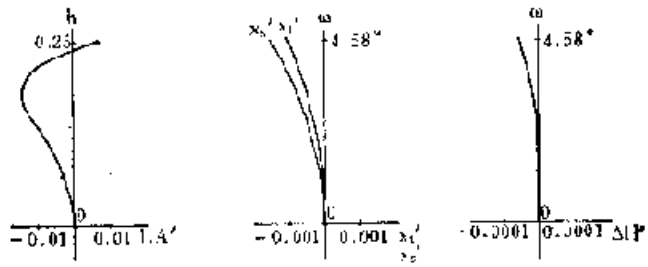


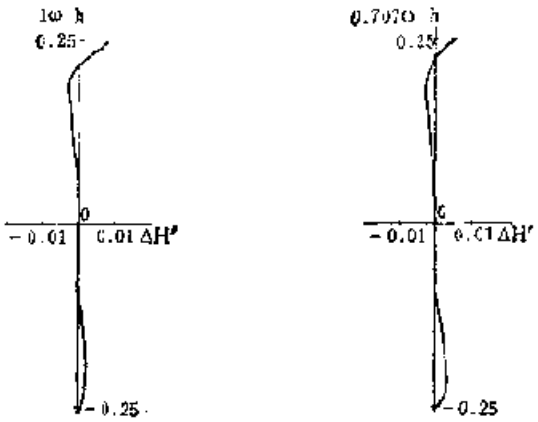
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	0.634	0.376	1.635	1.6183	5	9.236	0.069	1.635	1.6183
2	−8.388	0.150*			6	− 0.745	0.015		
3	0.479	0.312	1.617	1.6367	7	15.304	0.085	1.516	1.5204
4	0.703	0.072			8	− 0.477			

0.150* = 0.050 + 0.100

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HJ	QF(1ω)
	− 0.0046	− 0.00034	0.000029	− 0.00021	− 0.000024	0.08	− 0.062%

h 或 ω %	$\Delta A'$	$\Delta H'$	x_t'	x_s'	$x_t' - x_s'$	K_{T1}	$K_{T0.7}$
100	0.0072	− 0.000051	− 0.0010	0.0015	0.000489	0.0033	0.00057
70	− 0.013	− 0.000018	− 0.00052	− 0.00076	0.00024	0.0023	− 0.00042

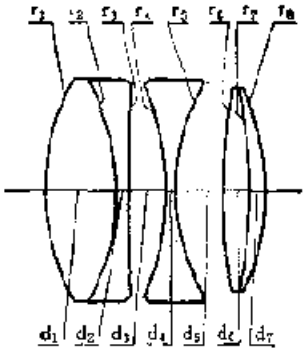




编号：02-00-006

摄　影　物　镜

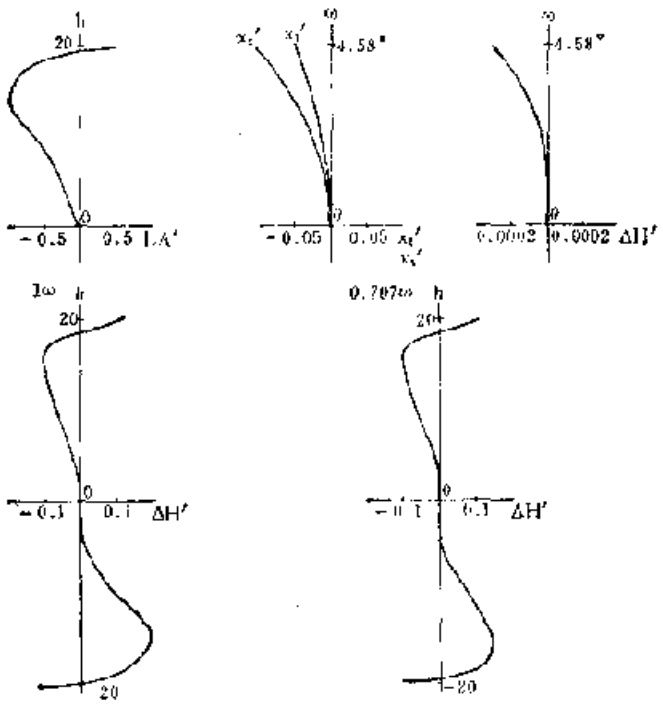
E. F. L＝100　　B. F. L＝80.72　　FNo. ＝2.5　　F. A. ＝ ± 4.58°**



序号	r	d	nD	ν	序号	r	d	nD	ν
1	40.37	13.30	1.8139	35.4	5	38.07	9.03*		
2	− 43.81	2.20	1.5490	45.1	6	104.60	4.80	1.5990	57.2
3	727.39	6.66			7	− 89.47	3.30	1.5479	62.8
4	50.13	2.00	1.8260	30.2	8	− 41.58			

9.03* ＝ 4.50 ＋ 4.53

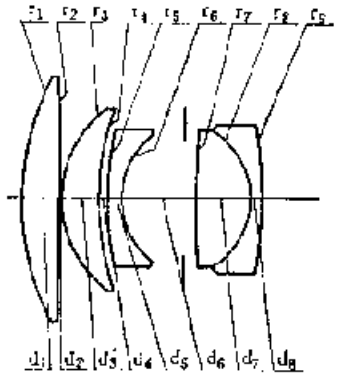
	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	− 0.24	0.0056	0.0022	− 0.010	− 0.00011	3	− 0.0039%
h 或 ω%	LA′	ΔH′	x_3^*	x_5^*	$x_3^* - x_5^*$	K_{T1}^*	$K_{T(.7}^*$
100	0.52	− 0.00032	− 0.047	− 0.103	0.056	− 0.023	0.017
70	1.00	0.00010	0.023	− 0.051	0.028	0.023	0.012



编号：02-00-007

四组五片摄影物镜

E. F. L＝100　　B. F. L＝47.91　　FNo. ＝1.8　　F. A. ＝＋25°

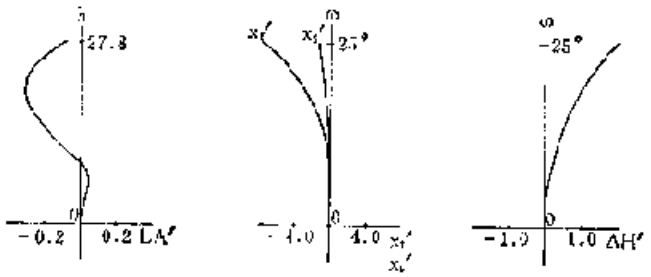


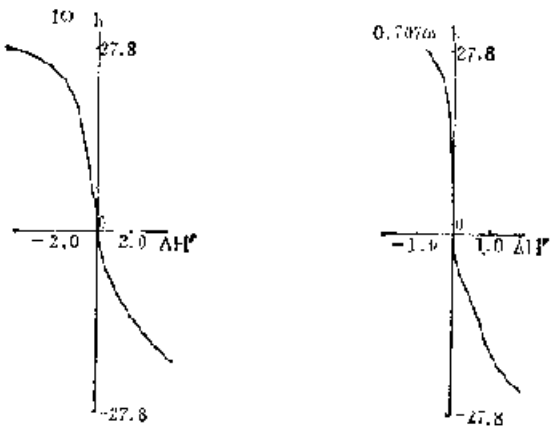
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	79.46	10.60	1.5885	61.2	6	21.89	20.60*		
2	1960.00	0.40			7	238.18	16.10	1.6584	51.0
3	30.97	10.20	1.6694	47.3	8	− 21.70	3.0	1.5718	53.1
4	73.83	2.85			9	137.17			
5	127.83	4.10	1.7402	28.1					

20.60* = 12.00 + 8.60

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	− 0.26	0.18	0.13	− 0.31	1.08	42.44	5.5%

h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K_{41}'	$K_{T0.7}'$
100	− 0.088	2.33	− 8.37	− 1.73	− 6.34		1.09
70	− 0.32	0.68	− 2.25	− 1.62	− 1.23	0.92	0.42

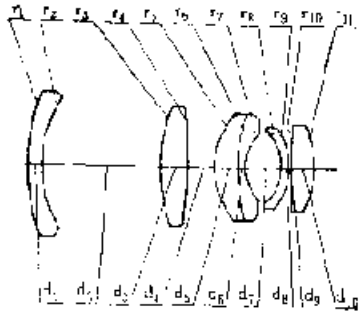




编号：02-00-008

大 孔 径 摄 影 物 镜

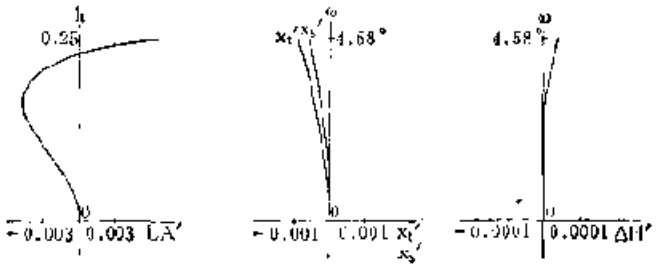
E. F. L＝1.0　　B. F. L＝0.7861　　FNo. ＝2　　F. A. ＝±4.58°**

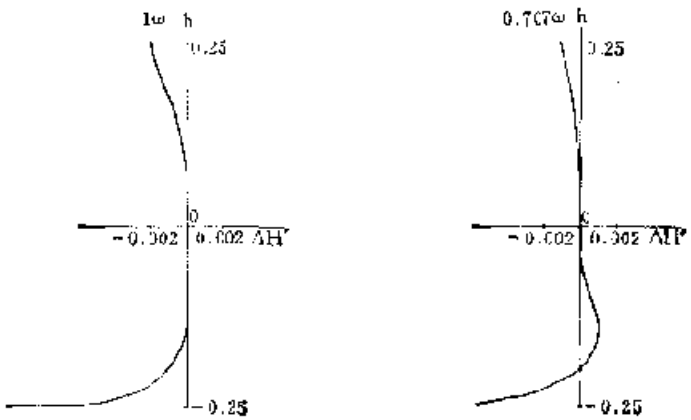


序号	r	d	n_d	ν	序号	r	d	n_d	ν
1	1.4083	0.0782	1.62170	60.4	7	0.2871	0.2033*		
2	0.6857	0.7350			8	−0.2831	0.0547	1.75679	27.5
3	0.9128	0.1564	1.65867	50.7	9	−0.3630	0.0039		
4	−3.9156	0.3642			10	9.4762	0.1447	1.59105	61.2
5	0.4303	0.1681	1.69647	53.7	11	−0.5392			
6	1.3301	0.0391	1.75520	27.5					

0.2033* − 0.1000 + 0.1033

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	PI	QP(1ω)
	−0.0023	0.000096	−0.000020	−0.000056	0.000017	0.08	0.043%
h 或 ω%	$\Delta A'$	$\Delta H'$	x_t'	x_s'	$x_t'-x_s'$	K_T^*	$K_{T0.7}^*$
100	0.0067	0.000034	−0.00093	−0.00061	−0.00034	−0.0058	−0.00046
70	−0.0048	0.000012	−0.00017	−0.00031	−0.00016	−0.0041	−0.00033

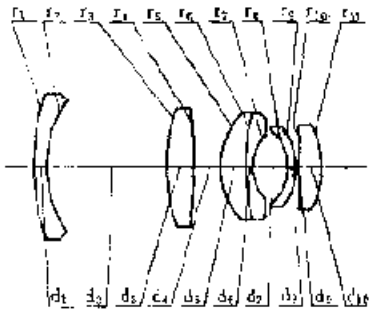




编号：02-00-009

大 孔 径 摄 影 物 镜

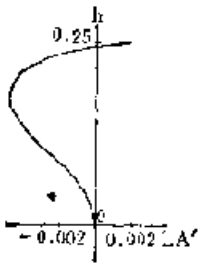
E. F. L＝1　　B. F. L＝0.7862　　FNo. ＝2　　F. A. ＝±4.58°**

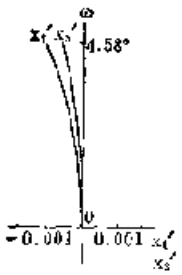


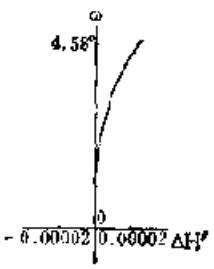
序号	r	d	n_d	ν	序号	r	d	n_d	ν
1	1.2722	0.0788	1.62170	60.4	7	0.2790	0.2126*		
2	0.6861	0.7403			8	−0.2855	0.0551	1.75679	27.5
3	0.8645	0.1575	1.65867	50.7	9	−0.3656	0.0039		
4	−4.8097	0.0709			10	34.6101	0.1457	1.59105	61.2
5	0.4244	0.1693	1.69347	53.7	11	−0.5209			
6	0.9940	0.0394	1.75520	27.5					

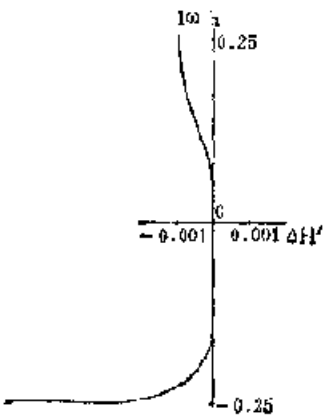
0.2126* = 0.1000 + 0.1126

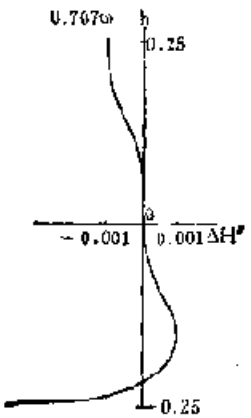
	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.0023	0.00010	−0.000323	−0.0000049	0.000012	0.08	0.03%
h 或 ω %	$\Delta A'$	$\Delta H'$	x_t	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.0018	0.000024	−0.00096	−0.00058	−0.00038	−0.0035	−0.00017
70	−0.0051	0.000008	−0.00047	−0.00029	−0.00018	−0.0025	−0.00012







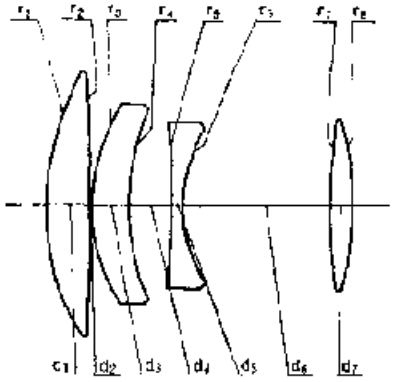




编号：02-00 010

摄　影　物　镜

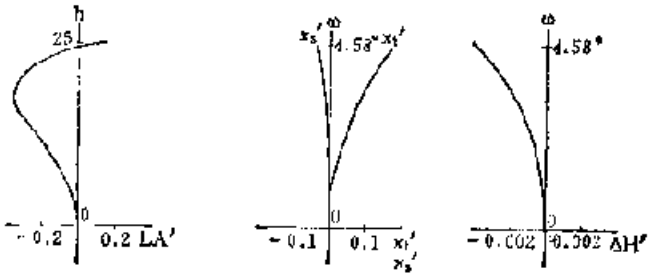
E. F. L＝100　　**B. F. L＝58.15**　　**FNo. ＝2**　　**F. A. ＝±4.58° ****

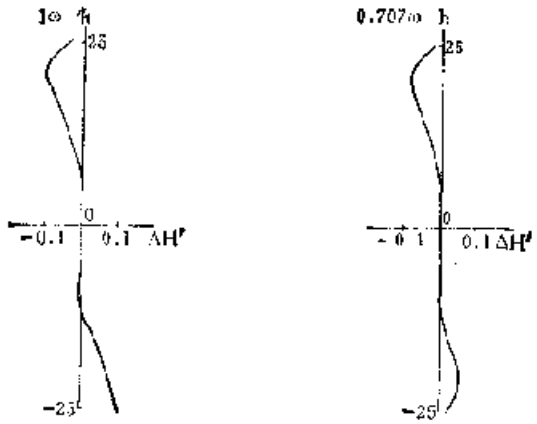


序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	52.000	9.000	1.56384	1.57532	5	−260.000	2.000	1.64769	1.67249
2	−450.000	0.000			6	28.840	30.000*		
3	36.000	8.000	1.56384	1.57532	7	110.000	5.000	1.56384	1.57532
4	48.539	8.605			8	−61.496			

30.000* = 15.000 + 15.000

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	OP(1ω)
	−0.15	−0.020	0.013	−0.017	−0.0020	8	−0.050%
h 或 ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	$K_{F.}'$	$K_{f0.7}'$
100	0.007	−0.0040	0.170	−0.032	0.202	0.026	−0.013
70	0.37	−0.0014	0.091	−0.015	0.107	−0.0061	−0.016

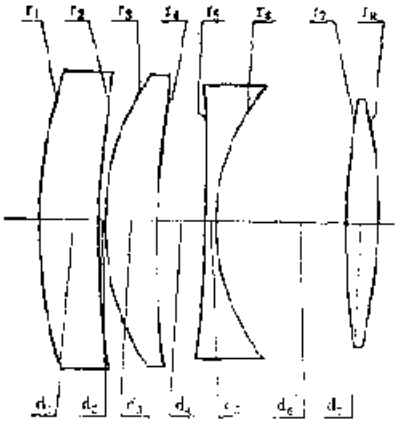




编号：02-00-011

消球差、色差和象散的摄影物镜

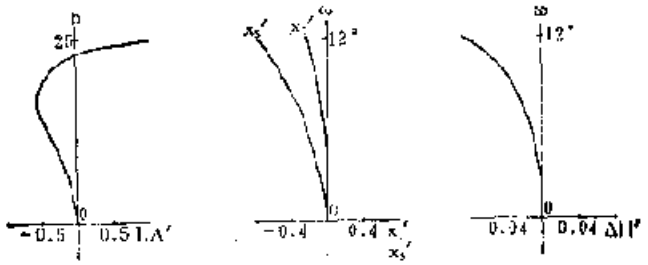
E. F. L＝100　　B. F. L＝74.1　　FNo. ＝ 2　　F. A. ＝ ±12°

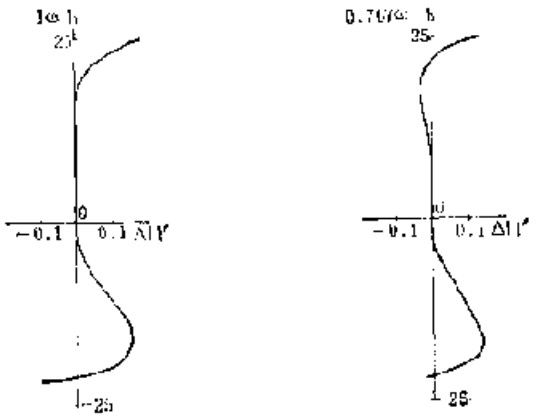


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	80.2	9.3	1.6130	58.5	5	－320.7	2.0	1.6489	33.8
2	142.8	0.5			6	33.0	20.0*		
3	56.1	8.4	1.6130	58.5	7	114.2	4.6	1.6130	58.5
4	173.1	7.1			8	－77.3			

20.0* = 12.0 − 8.0

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP (1ω)
	－0.25	0.051	0.033	－0.13	－0.027	22.08	－0.38%
h 或 ω %	$\Delta A'$	$\Delta H'$	x_2'	x_5'	$x_2' - x_5'$	K_{21}'	$K_{70.7}'$
100	1.00	－0.084	－0.20	0.76	0.56	－0.54	0.080
70	－0.58	－0.025	－0.11	－0.40	0.29	－0.32	0.056

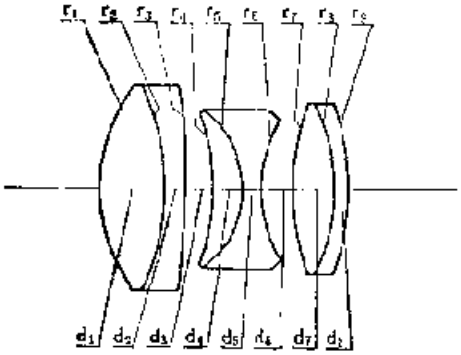




编号：02-00-012

大　孔　径　物　镜

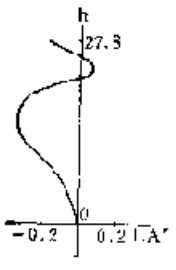
E. F. L＝100　　**B. F. L＝60.10**　　**FNo. ＝1.8**　　**F. A. ＝±4.58°****

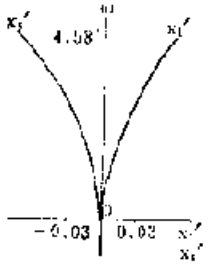


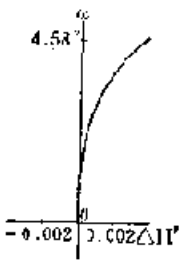
序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	48.8	17.98	1.624	58.2	6	37.1	8.00*		
2	−69.3	5.72	1.622	36.1	7	81.7	11.44	1.624	58.2
3	−208.4	7.85			8	−47.8	4.09	1.541	47.2
4	−53.7	8.17	1.624	58.2	9	−63.2			
5	27.6	4.90	1.567	42.8					

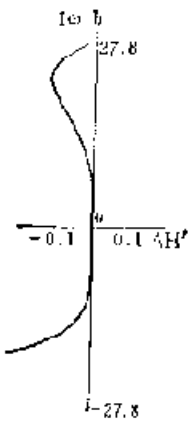
8.99* = 5.00 + 3.99

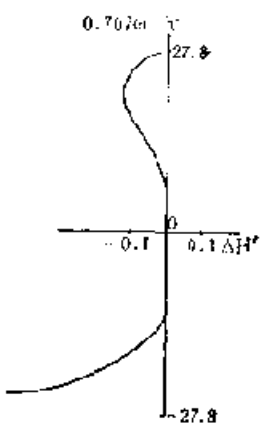
	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HJ	QP (1ω)
	−0.32	0.0084	0.010	−0.022	0.0019	8	0.045%
h 或 ω%	LA′	ΔH′	x_t	x_s	$x_t^{\omega} - x_s^{\omega}$	K_{T1}^{ω}	$K_{T0.7}$
100	−0.19	0.0036	0.063	0.074	0.137		−0.17
70	0.33	0.0012	0.031	0.037	0.068		0.13







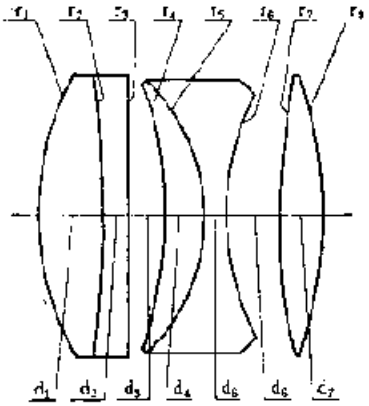




编号：02-00-013

大　孔　径　物　镜

E. F. L＝100　　**B. F. L＝74.92**　　**FNo. ＝2.5**　　**F. A. ＝±23.5°**

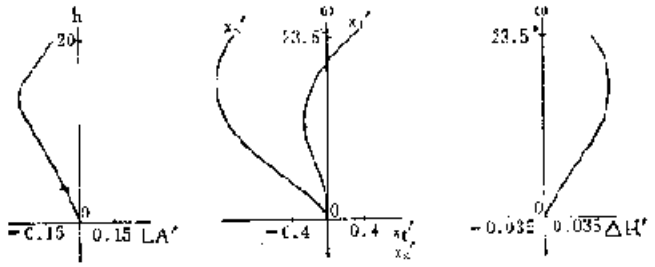


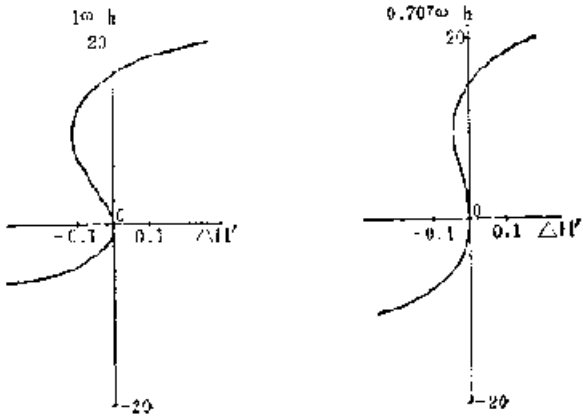
序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	45.3	9.60	1.624	58.2	5	−27.8	3.20	1.567	42.8
2	−160.0	4.00	1.622	36.1	6	38.0	8.16*		
3	−500.0	5.84			7	95.2	6.40	1.624	58.2
4	−61.5	6.20	1.624	44.8	8	−65.4			

$8.16^{*} = 4.00 - 3.65$

	ΣS	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP (1ω)
	−0.086	0.018	0.044	−0.28	0.13	43.47	0.13%

h 或 ω %	LA′	ΔH′	x_t	x_s	$x'_t - x'_s$	K'_{T1}	$K'_{T0.7}$
100	−0.12	0.058	0.20	−1.15	1.41		−1.01
70	−0.27	0.074	−0.26	−1.16	0.90		−0.34

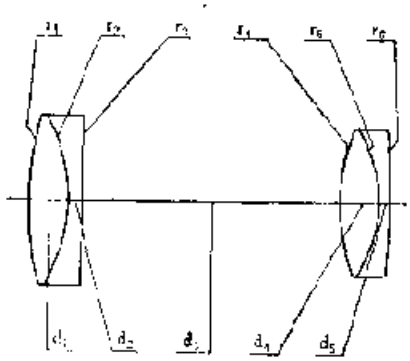




编号：02-00-014

放　映　物　镜

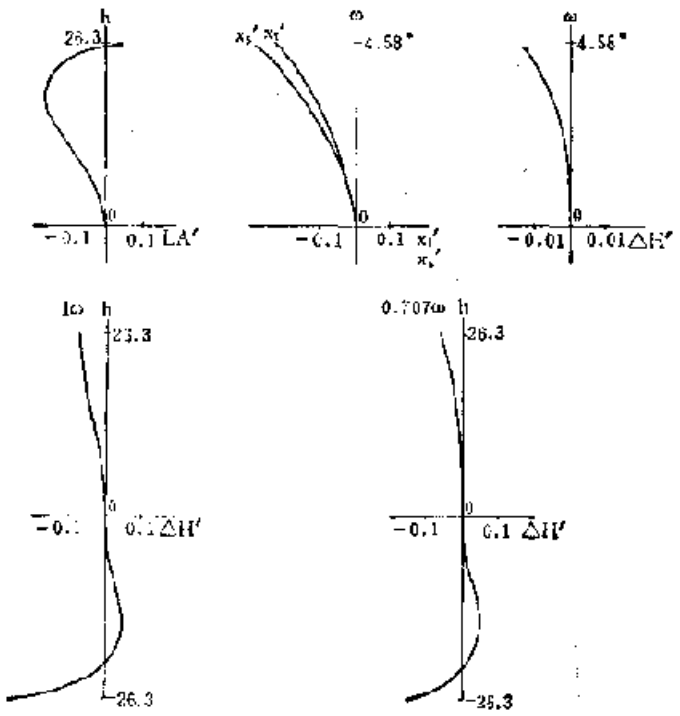
E. F. L＝100　　B. F. L＝38.4　　FNo. ＝1.9　　F. A. ＝＋4.58°



序号	r	d	nD	ν	序号	r	d	nD	ν
1	90.00	12.5	1.5799	53.8	4	68.00	11.5	1.5904	51.2
2	− 60.00	4.0	1.6130	36.9	5	− 42.30	3.0	1.6489	33.8
3	∞	79.5*			6	− 386.92			

79.5* = 30.0 + 49.5

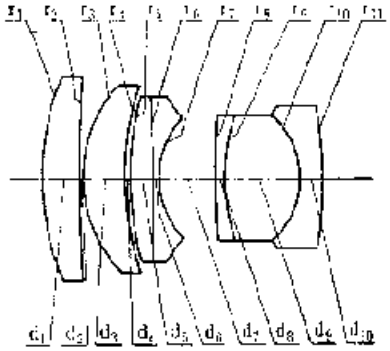
	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP (1∞)
	− 0.085	0.012	0.0033	− 0.043	− 0.0073	8	− 0.17%
h 或 ω%	LA′	ΔH′	x_t	x_s	$x_t - x_s'$	K_{T1}	$K_{T0.7}$
100	0.036	− 0.014	− 0.228	− 0.285	0.059	− 0.17	− 0.0076
70	− 0.18	− 0.0050	− 0.113	− 0.143	0.0268	− 0.10	− 0.0033



编号：02 00 015

摄　影　物　镜

E. F. L = 100　　B. F. L = 44.81　　FNo. = 2　　F. A. = ±22.5°

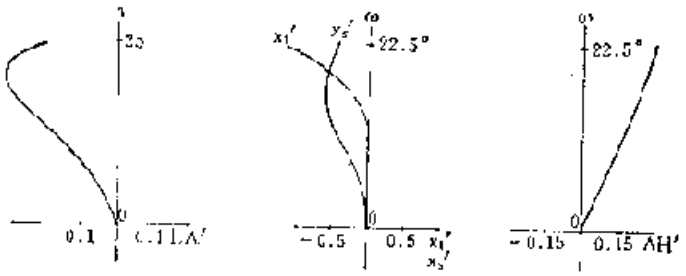


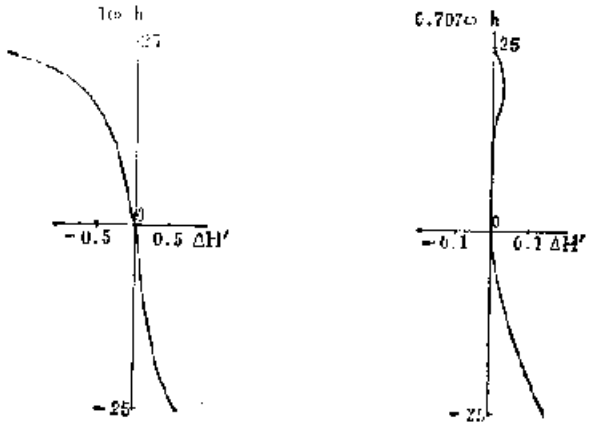
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	69.47	10.66	1.6221	58.1	7	24.40	15.60*		
2	450.51	0.10			8	788.13	2.97	1.5112	50.9
3	37.25	12.17	1.6706	47.2	9	53.75	20.93	1.7016	41.2
4	84.49	1.00			10	−22.66	5.92	1.8429	47.8
5	88.64	6.92	1.4879	69.9	11	−106.07			
6	−654.79	1.76	1.7391	28.3					

15.60* = 10.00 + 5.60

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QP (1ω)
	0.11	0.054	0.083	−0.30	0.41	42.29	0.72%

入或ω%	LA′	ΔH′	x_t	x_s^*	$x_t' - x_s'$	K_{T1}^*	$K_{70.7}^*$
100	−0.21	0.30	−1.15	−0.45	−0.70	−1.18	−0.17
70	−0.30	0.24	−0.32	−0.60	0.48	0.63	0.057

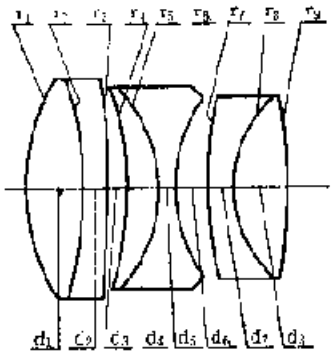




编号：02-00-016

大　孔　径　物　镜

E. F. L＝100　　B. F. L＝67.81　　FNo. ＝2.5　　F. A. ＝±4.58°**

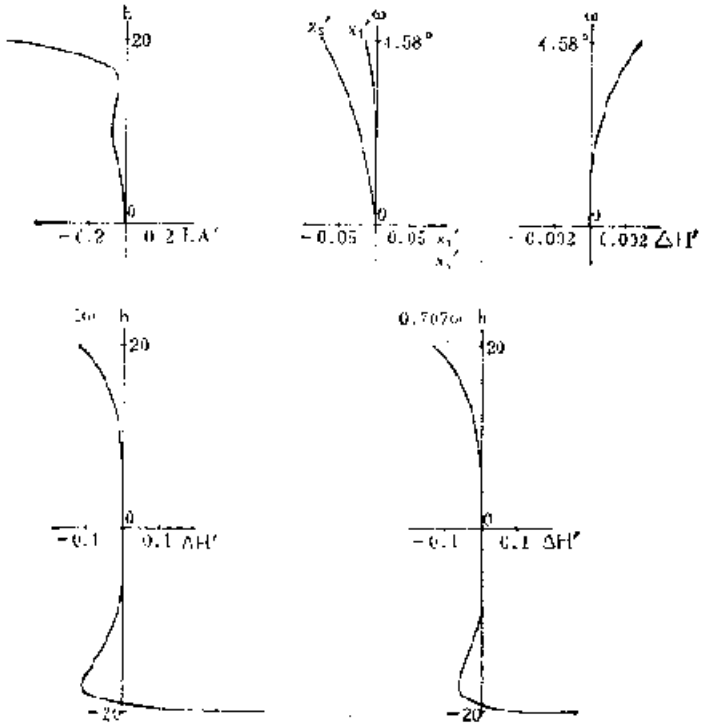


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	37.04	11.00	1.6233	58.1	6	28.96	5.62*		
2	− 67.36	4.22	1.6122	37.3	7	69.82	4.68	1.5899	53.0
3	−354.50	3.60			8	22.36	10.30	1.6233	58.1
4	− 61.12	5.62	1.6741	32.6	9	− 88.28			
5	27.56	3.74	1.58158	49.3					

5.62* = 3.00 + 2.62

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP (1/r)
	− 0.045	− 0.0024	0.0027	− 0.0134	0.0010	8	0.033%

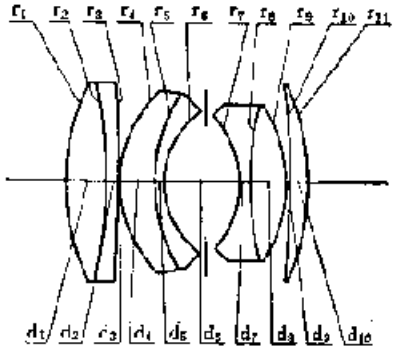
η 或 Q%	L.A.′	Δl′	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	− 0.72	0.0026	− 0.012	− 0.082	0.070	0.13	− 0.060
70	− 0.078	0.00096	− 0.0069	− 0.041	0.0341	0.065	− 0.040



编号：02-00-017

摄　影　物　镜

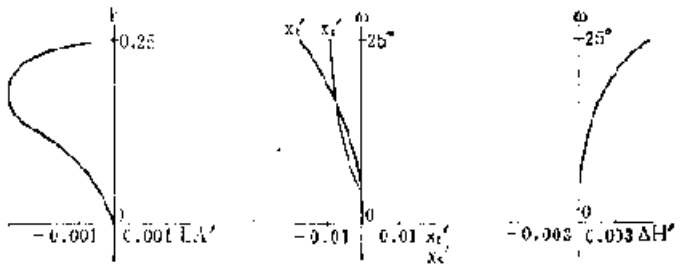
E. F. L = 1　　B. F. L = 0.684　　FNo. = 2　　F. A. = ±25°

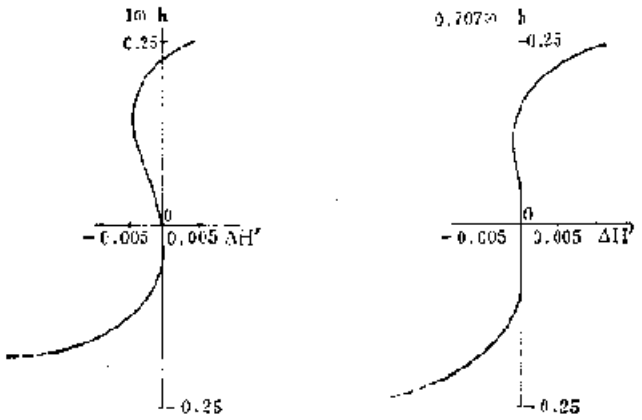


序号	r	d	nD	ν	序号	r	d	nD	ν
1	0.6886	0.108	1.5338	55.4	7	−0.2823	0.030	1.5073	42.8
2	−1.2296	0.030	1.6727	32.2	8	0.8853	0.108	1.6204	60.3
3	−19.5650	0.002			9	−0.3787	0.002		
4	0.3325	0.098	1.6700	47.2	10	−19.5650	0.049	1.6074	56.7
5	0.4623	0.030	1.6645	35.9	11	−0.6709			
6	0.2351	0.207*							

0.207* = 0.116 + 0.091

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP (1ω)
	−0.00112	0.000032	0.00059	0.0031	0.0022	0.46	1.27%
h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	−0.00073	0.0059	−0.009	−0.010	−0.0088	−0.036	−0.0099
70	−0.0030	0.0018	−0.0090	−0.0090	−0.00005	0.0085	0.0026

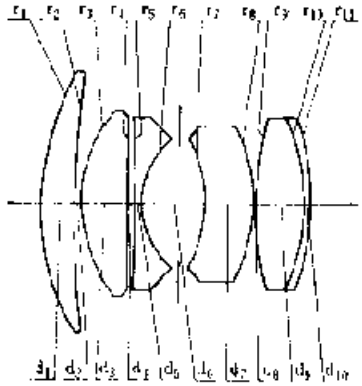




编号：02-00-018

摄　影　物　镜

E. F. L＝3　　B. F. L＝1.883　　FNo. ＝1.35　　F. A. ＝±18°

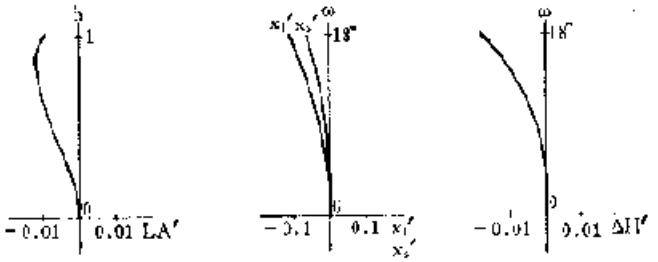


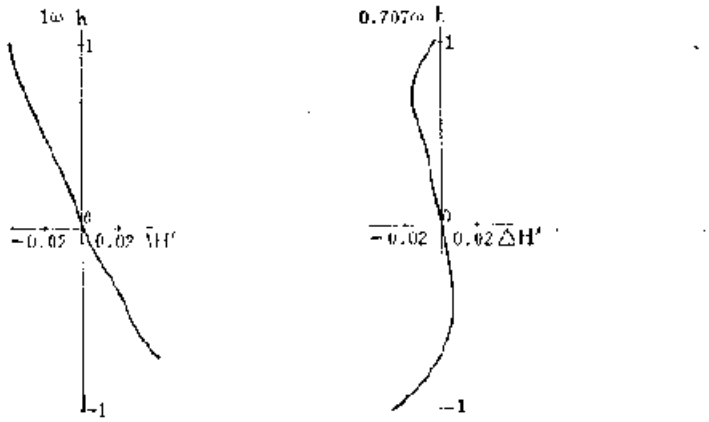
序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	2.615	0.340	1.6230	57.1	7	− 1.214	0.492	1.6480	33.8
2	9.712	0.0486			8	− 1.700	0.0061		
3	1.426	0.492	1.6230	57.1	9	3.398	0.492	1.6106	55.6
4	∞	0.0486			10	− 2.069	0.067	1.6480	46.5
5	− 19.423	0.037	1.5490	45.7	11	− 2.461			
6	0.886	0.6430*							

0.6430* − 0.4200 + 0.2230

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	IH	CP (1ω)
	− 0.0070	0.000074	0.0058	0.012	− 0.0079	0.97	− 1.82%

h 或ω %	LA′	ΔH′	x_1'	x_2'	x_1' x_2'	K_{T1}'	$K_{0.7}'$
100	0.010	0.017	− 0.136	− 0.068	− 0.067		0.0013
70	− 0.011	− 0.0056	− 0.060	− 0.035	− 0.024	− 0.013	− 0.0001

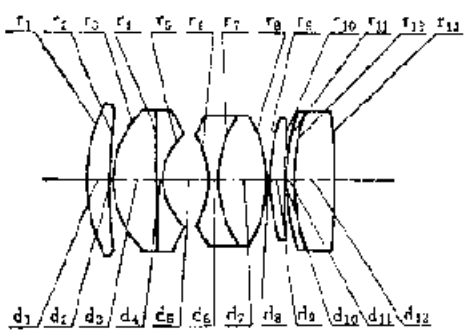




编号：02-00-019

消球差、色差和象散的大孔径物镜

E.F.L＝100　　B.F.L＝45.133　　FNo.＝1.2　　F.A.＝±4.58°**

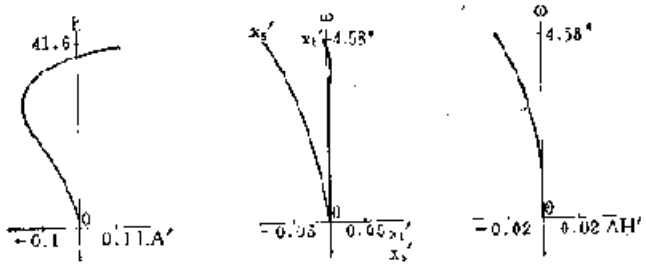


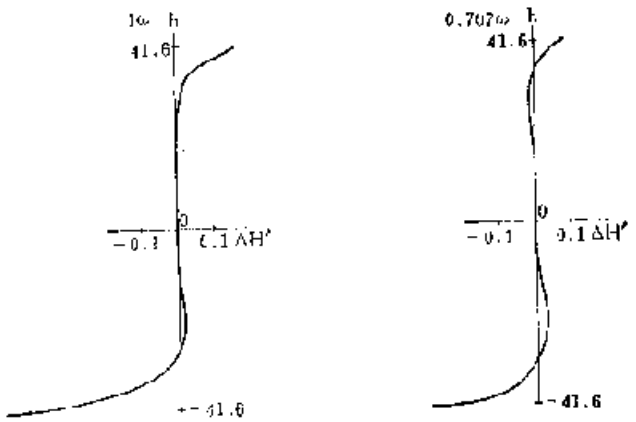
序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	96.980	12.55	1.61503	59.4	8	−63.893	0.63		
2	486.380	1.26			9	86.980	9.13	1.62020	56.2
3	84.480	23.96	1.61503	59.4	10	∞	0.63		
4	∞	3.99	1.56384	46.7	11	142.280	2.86	1.62020	36.5
5	33.316	25.10*			12	95.980	23.96	1.64230	44.8
6	−46.208	5.30	1.65220	56.2	13	−310.340			
7	63.893	26.24	1.62020	33.1					

25.10* = 18.00 + 7.10

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QP (1ω)
	−0.25	0.024	0.016	−0.049	−0.023	8	−0.32%

h 或 ω %	$\Delta A'$	$\Delta H'$	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.12	−0.026	−0.00013	−0.092	0.092	−0.18	0.0054
70	−0.16	−0.0092	0.00094	−0.046	0.047	−0.11	0.0067

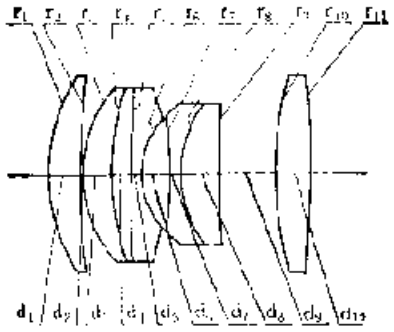




编号：02-00-020

摄　影　物　镜

E. F. L＝100　　B. F. L－41.3　　FNo. －2　　F. A. －＝4.58°**

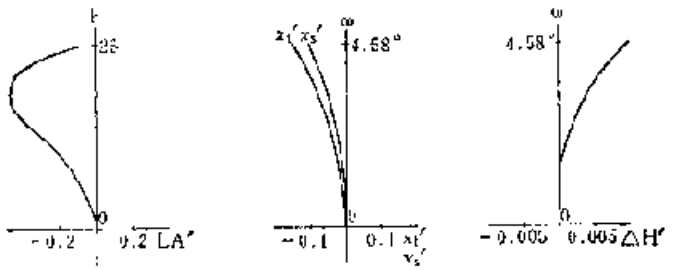


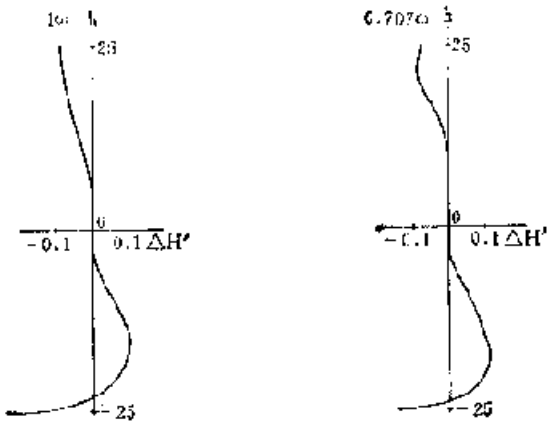
序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	51.8	8.0	1.6203	60.4	7	－ 298.6	3.9	1.5017	53.5
2	179.3	0.6			8	30.2	10.8	1.6716	47.2
3	34.0	8.9	1.6716	47.2	9	285.9	15.6*		
4	76.4	5.0	1.5163	64.0	10	114.4	9.7	1.6716	47.2
5	707.3	2.8	1.6890	31.0	11	297.3			
6	32.3	7.2							

15.6* ＝8.0＋7.6

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	Q (1ω)
	0.16	0.020	0.0035	－0.010	0.0048	8	0.11%

h 或 ω %	$\triangle A'$	$\triangle H'$	x_1'	x_5'	$x_1' - x_5'$	h_{11}'	$h_{10.7}'$
100	－0.10	0.0092	－0.15	－0.10	－0.044	－0.17	0.023
70	－0.48	0.0033	－0.080	－0.055	－0.025	－0.10	0.020

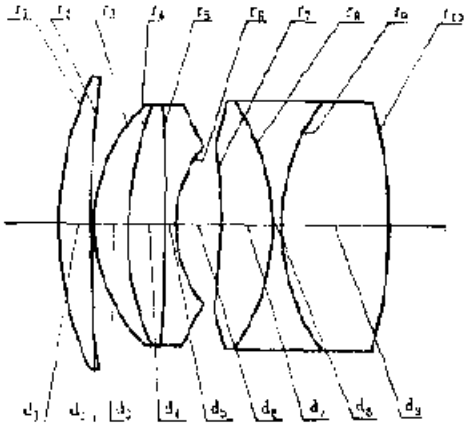




编号：02 00 021

摄　影　物　镜

E. F. L＝100　　B. F. L＝54.53　　FNo. ＝ 2　　F. A. ＝±4.58° **

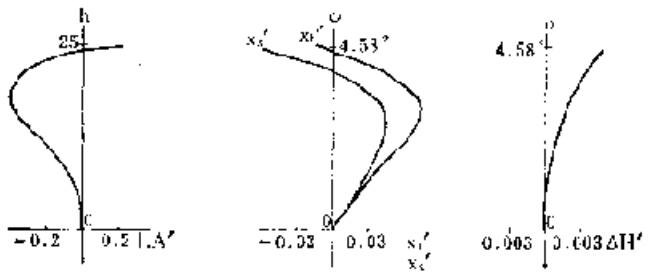


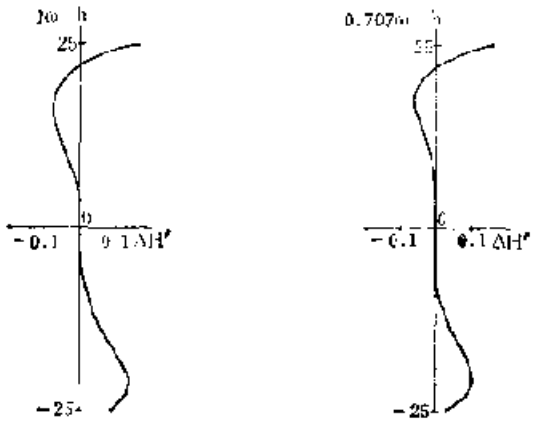
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	67.54	6.79	1.6204	60.3	6	24.08	9.44*		
2	380.08	0.38			7	−128.76	10.76	1.6204	60.3
3	34.01	7.17	1.7618	41.2	8	− 44.87	1.13	1.5174	52.4
4	63.22	7.55	1.5400	59.6	9	41.14	22.46	1.6689	48.8
5	−461.81	1.89	1.6883	31.2	10	− 89.32			

9.44* = 7.50 + 1.94

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP (1ω)
	− 0.20	− 0.0062	0.0029	− 0.010	0.0023	8	0.059%

h 或 ω %	LA′	ΔH′	x_1^t	x_5^t	$x_2^t - x_8^t$	K_{T1}^t	$K_{T1.7}^t$
100	0.21	0.0047	− 0.014	− 0.060	0.046	0.12	0.011
70	− 0.42	0.0018	0.069	0.045	0.023	0.085	0.0068

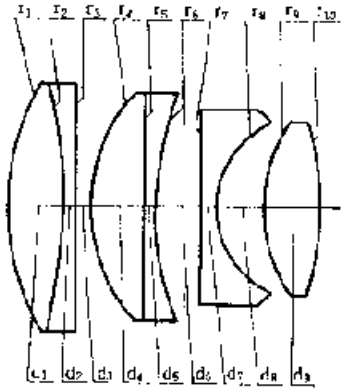




编号：02-00-022

用于摄影或放映的物镜

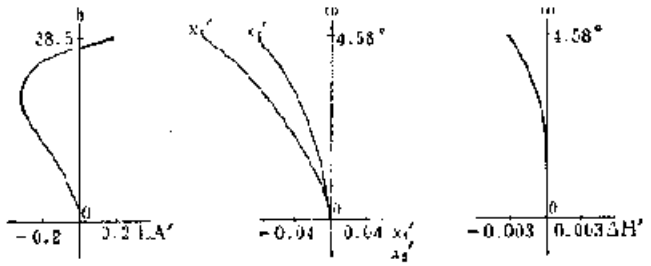
E. F. L＝100　　B. F. L＝35.23　　FNo. ＝1.3　　F. A. ＝±4.58° **

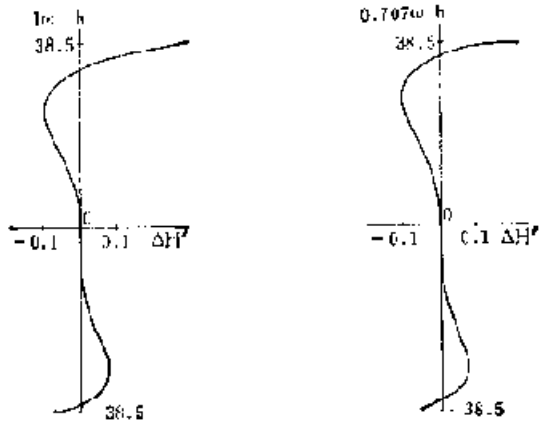


序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	74.34	16.64	1.5338	55.4	6	92.96	13.90*		
2	−158.04	3.72	1.8545	33.8	7	∞	4.60	1.6080	46.2
3	∞	4.60			8	28.08	14.68		
4	50.40	16.64	1.6204	60.3	9	45.50	16.64	1.6074	56.7
5	−929.53	3.72	1.7283	28.3	10	− 96.19			

13.90* − 8.40 + 5.50

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP (1ω)
	− 0.34	− 0.025	0.011	− 0.058	− 0.00090	8	− 0.040%
h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.21	− 0.0032	− 0.085	− 0.154	0.069	0.11	− 0.015
70	− 0.34	− 0.00277	− 0.040	− 0.077	0.037	0.083	− 0.011

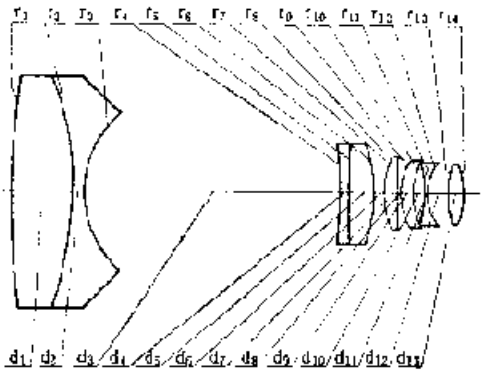




编号：02-00-023

六组元大孔径物镜

E.F.L＝1　　B.F.L＝1.316　　FNo.＝1.9　　F.A.＝±25°

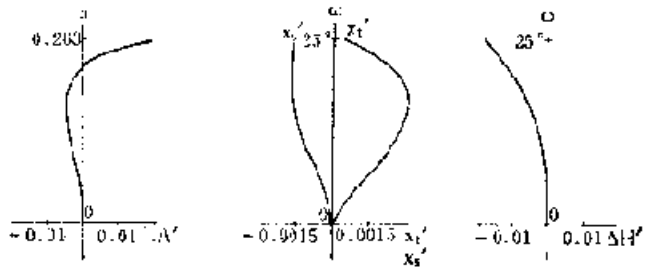


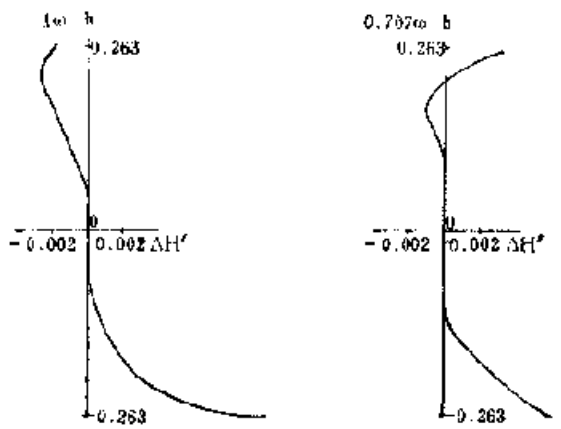
序号	r	d	nD	νD	序号	r	d	nD	νD
1	13.320	0.925	1.6727	32.2	8	−22.940	0.004		
2	− 5.027	0.182	1.5101	63.4	9	0.840	0.217	1.6204	60.3
3	1.600	3.850			10	1.077	0.148		
4	− 8.158	0.182	1.6737	32.2	11	− 2.800	0.062	1.6990	30.1
5	26.990	0.367	1.5101	63.4	12	0.722	0.298*		
6	− 2.595	0.147			13	2.010	0.235	1.6385	55.5
7	1.406	0.250	1.6204	60.3	14	− 1.101			

0.298* − 0.150 + 0.148

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QP (1ω)
	− 0.0031	− 0.00017	0.00.0	− 0.0016	− 0.0094	0.46	− 3.66%

h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.018	− 0.017	0.0006	− 0.0015	0.0022	0.0038	− 0.000034
70	− 0.0050	− 0.0050	0.0034	0.0017	0.0051	0.0044	0.00033

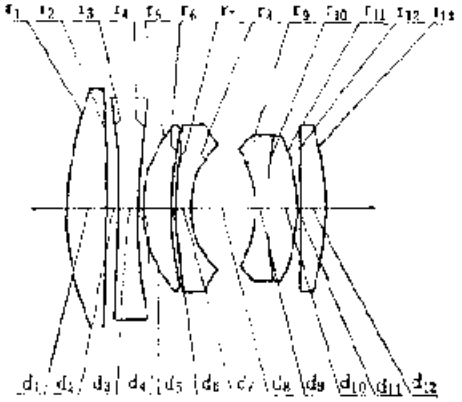




编号：02-00-024

摄　影　物　镜

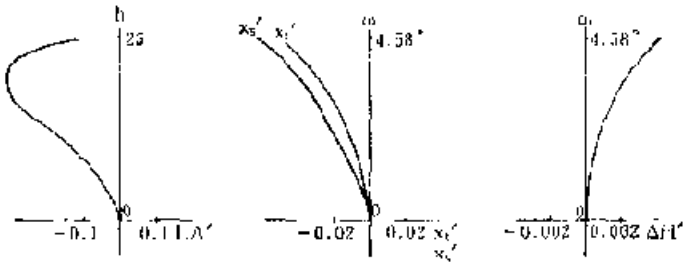
E.F.L＝100　　B.F.L－61.47　　FNo. ＝ 2　　F.A. ＝ ±4.58°**

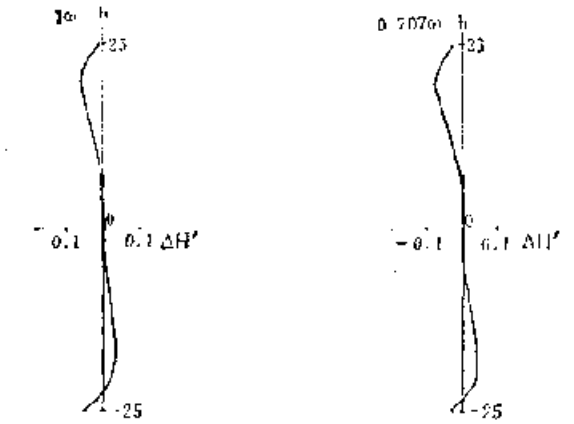


序号	r	d	nD	ν	序号	r	d	nD	ν
1	82.10	10.460	1.69100	54.9	8	24.79	18.160*		
2	－440.92	2.900			9	－ 36.12	3.770	1.58144	40.8
3	－364.46	6.870	1.62237	36.1	10	132.85	3.100	1.69100	54.9
4	209.11	0.192			11	－ 54.35	0.192		
5	33.68	8.480	1.69100	54.9	12	744.71	6.940	1.69100	54.9
6	109.64	0.515			13	－ 78.86			
7	45.08	4.060	1.60140	38.3					

18.160* ＝ 9.000 ＋ 9.160

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QP (1ω)
	－0.12	－0.0034	0.00034	－0.0088	0.0021	8	0.053%
h 或 ω%	l_A'	$\Delta l'$	x_t	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	－0.11	0.0042	－0.048	－0.067	0.014	－0.048	－0.016
70	－0.30	0.0015	－0.024	－0.031	0.0067	－0.034	－0.011

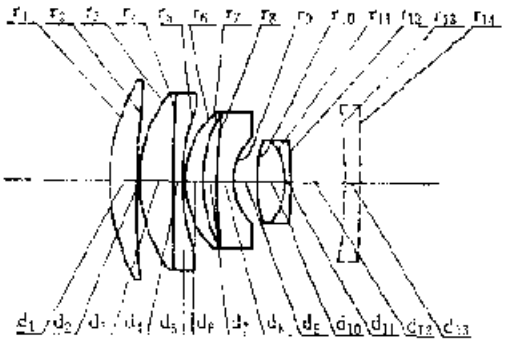




编号：02-00-025

X 光屏图象成象用的物镜

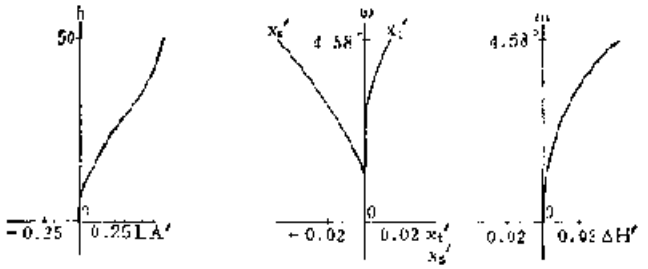
E. F. L＝100　　B. F. L＝－7.4　　FNo. ＝ 1　　F. A. ＝ ± 4.58°**

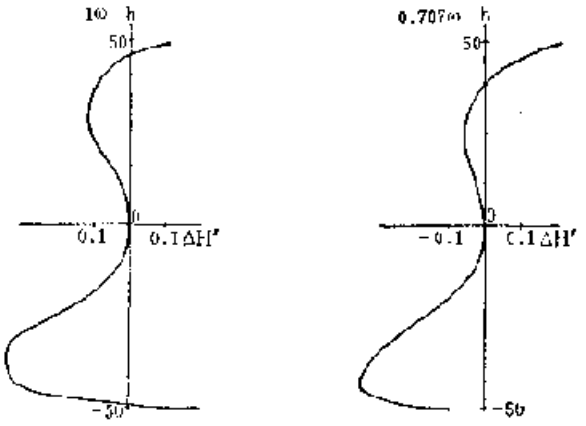


序号	r	d	n_D	n_F	序号	r	d	n_D	n_F
1	103.2	15.80	1.62470	1.62960	8	229.1	8.98	1.74727	1.75983
2	748.2	0.30			9	32.4	12.47*		
3	79.4	18.72	1.69353	1.69926	10	75.3	16.19	1.72637	1.73624
4	1401.6	5.37	1.74727	1.75980	11	－35.7	2.28	1.63084	1.63912
5	120.7	0.30			12	－248.2	31.24		
6	49.3	10.89	1.69353	1.69926	13	－246.1	7.67	1.51824	1.52191
7	76.7	7.07			14	∞			

12.47* = 7.00 + 5.47

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	0.15	－0.32	0.014	－0.043	0.044	8	0.33%
h 或ω%	LA′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K_{41}'	$K_{40.7}'$
100	0.57	0.044	0.014	－0.049	0.063	0.13	－0.23
70	0.42	0.015	0.0020	－0.026	0.028	0.035	－0.16

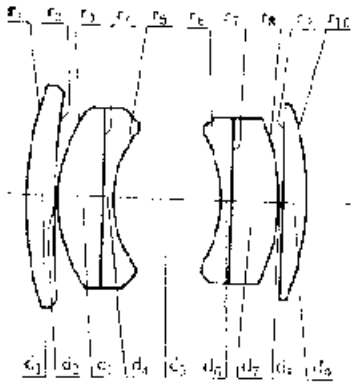




编号：02-00-026

摄影或电影摄影用的多组元替换透镜系统

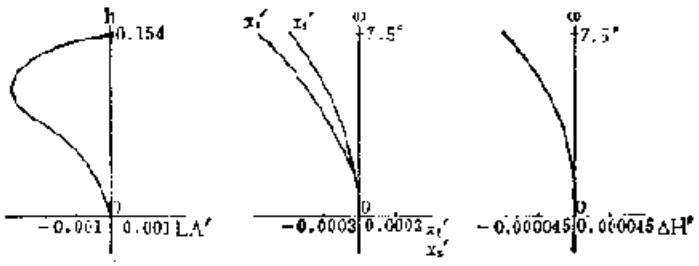
E. F. L＝0.616　　B. F. L＝0.45　　FNo. ＝ 2　　F. A. ＝ ±7.5° **

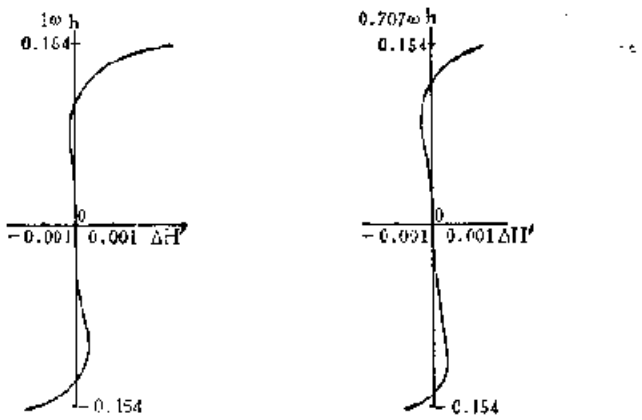


序号	r	d	n_D	v	序号	r	d	n_D	v
1	0.4656	0.0405	1.6667	48.4	6	− 0.1821	0.0150	1.6477	33.9
2	1.3516	0.0013			7	2.8524	0.0647	1.6910	54.8
3	0.2014	0.0641	1.6584	50.8	8	− 0.2582	0.0007		
4	∞	0.0131	1.6513	38.5	9	∞	0.0353	1.6700	47.2
5	0.1495	0.1477*			10	− 0.3919			

0.1477* = 0.0628 + 0.0849

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(2ω)
	− 0.001	− 0.0000074	0.000021	− 0.00015	− 0.000044	0.38	− 0.15%
h 或 ω%	LA′	ΔH′	x'_t	x'_s	$x'_t - x'_s$	$K'_{t\,1}$	$K'_{t\,0.7}$
100	− 0.000006	− 0.000002	− 0.00058	− 0.00088	0.00030	0.00063	0.00011
70	− 0.0028	− 0.000032	− 0.00029	− 0.00045	0.00015	0.00039	0.000075

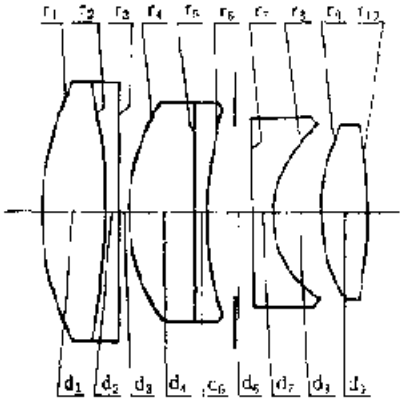




编号：02-00-027

用于摄影或放映的物镜

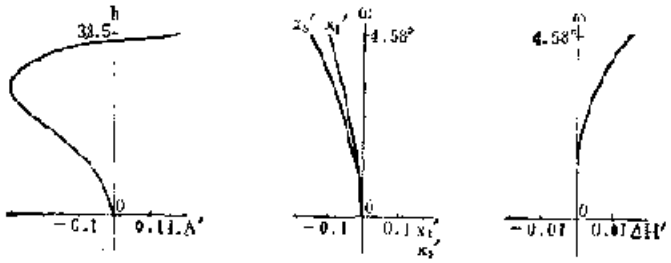
E. F. L＝100　　B. F. L＝34.68　　FNo. ＝1.3　　F. A. ＝±4.58°**

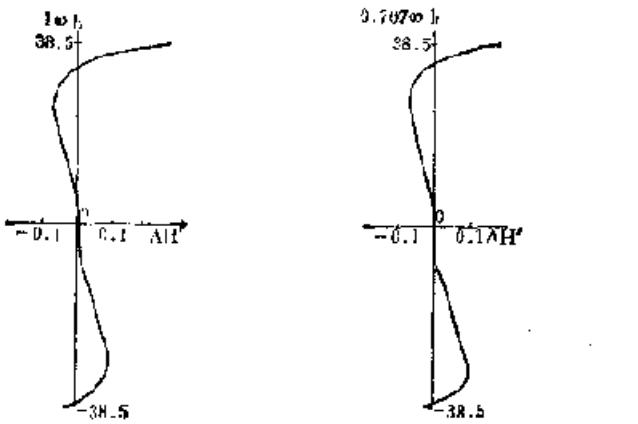


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	78.30	17.76	1.5338	55.4	6	98.64	12.82*		
2	−167.68	3.94	1.7283	28.3	7	∞	5.92	1.6073	49.2
3	−1185.52	2.95			8	28.60	12.82		
4	50.80	18.74	1.6230	58.1	9	47.34	13.32	1.6074	56.7
5	−986.34	3.94	1.7283	28.3	10	−108.50			

12.82* = 7.82 + 5.00

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QF (1ω)
	−0.30	−0.012	0.0071	−0.055	0.011	8	0.17%
h 或 ω%	$\Delta A'$	$\Delta H'$	x_t'	x_s'	$x_t' - x_s'$	K_{z1}'	$K_{z0.7}'$
100	0.18	0.014	−0.13	−0.15	0.048	0.1	0.0047
70	−0.30	0.0053	−0.055	−0.079	0.024	0.07	0.00032

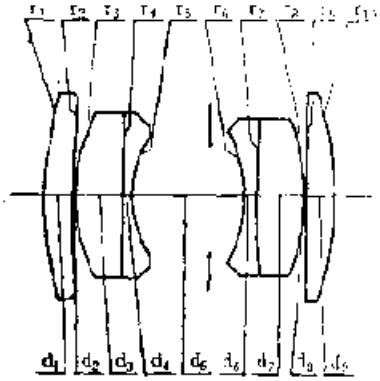




编号：02-00-028

多组元替换透镜系统

E. F. L＝1.293　　B. F. L＝0.946　　FNo. ＝ 2　　F. A. ＝±4.58° **

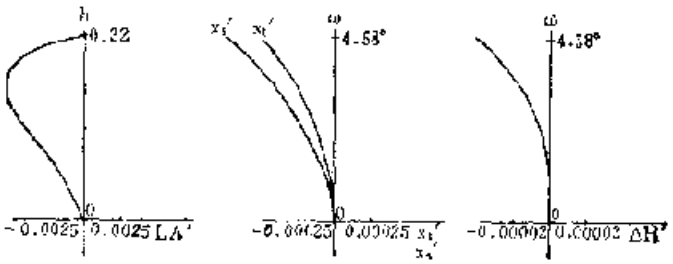


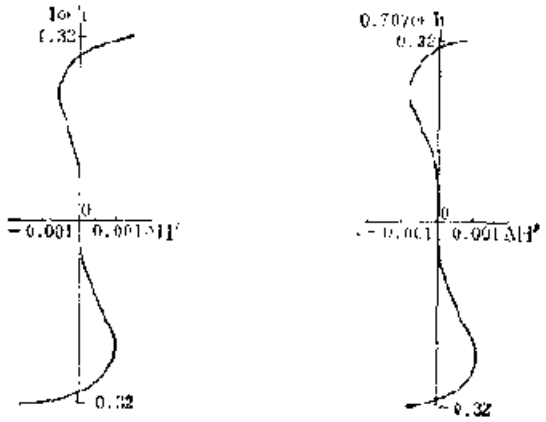
序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	0.9758	0.0849	1.6667	48.4	6	−0.3816	0.0315	1.6477	33.9
2	2.8326	0.0027			7	5.9778	0.1355	1.6910	54.8
3	0.4222	0.1342	1.6584	50.878	8	−0.5411	0.0014		
4	∞	0.0274	1.6513	38.5	9	∞	0.0740	1.6700	47.2
5	0.3134	0.3096*			10	−0.8213			

0.3096* − 0.2137 + 0.0959

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	$Q\Gamma(1\omega)$
	−0.0023	0.000086	0.000013	−0.00010	−0.000019	0.10	−0.030%

h 或 ω%	LA'	$\Delta H'$	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	−0.000067	−0.000040	−0.00055	−0.00076	0.00021	−0.00024	0.00014
70	−0.0057	−0.000014	−0.00027	−0.00038	0.00011	−0.000065	0.00012

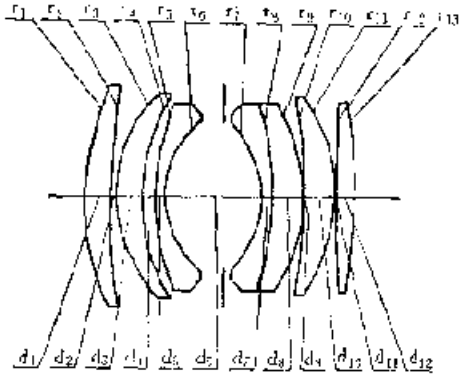




编号：02-00-029

短的大孔径摄影物镜

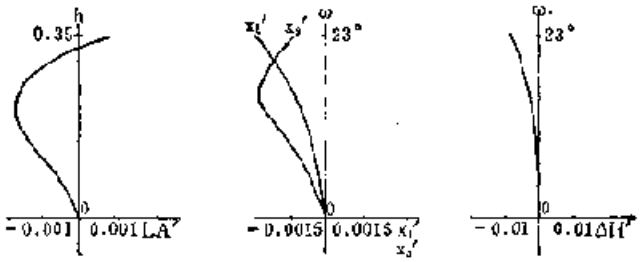
E. F. L = 1　　B. F. L = 0.741　　FNo. = 1.4　　F. A. = ± 23°

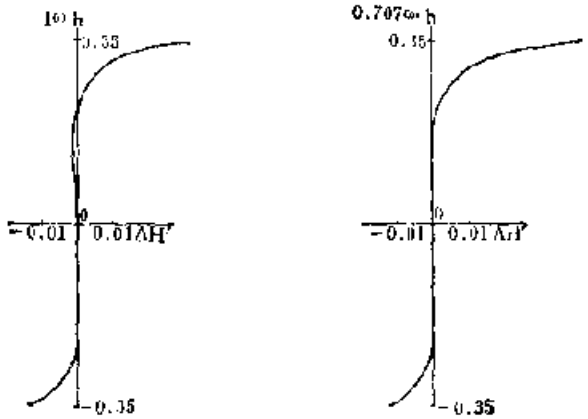


序号	r	d	n	v	序号	r	d	n	v
1	0.78185	0.08861	1.8348	42.8	8	−0.99807	0.09981	1.8061	40.8
2	2.59815	0.00232			9	−0.52703	0.00193		
3	0.42498	0.08734	1.8361	40.8	10	−1.50994	0.09691	1.713	54.0
4	0.60180	0.08456			11	−0.50290	0.00232		
5	0.69415	0.02606	1.7347	26.22	12	3.38224	0.05174	1.713	54.0
6	0.28654	0.30888			13	−1.86805			
7	0.31531	0.02845	1.7347	25.7					

0.30886 = 0.15886 + 0.15000

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	CI	QP(1°)
	−0.0025	−0.000050	0.00066	−0.0029	−0.0052	0.42	−1.95%
h 或 ω%	LA′	ΔH′	x_1'	x_3	$x_1' - x_3'$	K_{T1}'	$K_{T1,7}'$
100	0.00093	−0.0082	−0.0020	−0.0015	−0.0015	0.0087	0.00053
70	−0.0016	−0.0029	−0.0015	−0.0030	0.0015	0.013	0.0010

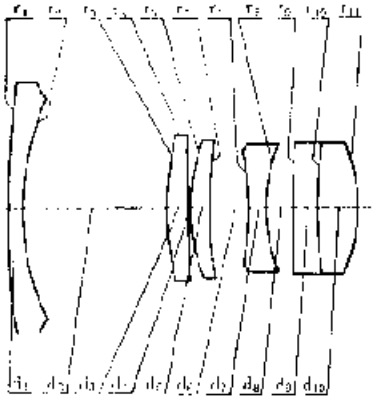




编号：02-00-030

摄　影　物　镜

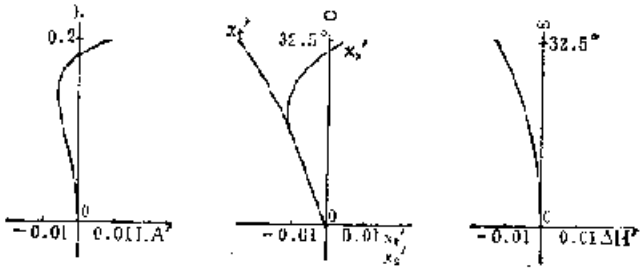
E. F. L = 1　　B. F. L = 1.0095　　FNo. = 2.5　　F. A. = ±32.5°

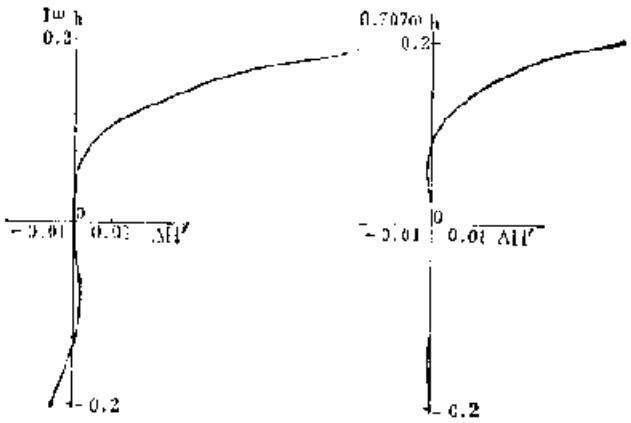


序号	r	d	n	ν	序号	r	d	n	ν
1	2.9000	0.040	1.51821	65.2	7	0.9400	0.055	1.68893	31.1
2	0.7890	0.430			8	0.5230	0.082		
3	0.9300	0.070	1.74400	44.7	9	3.8500	0.070	1.66680	33.1
4	-5.0000	0.002			10	1.4000	0.120	1.59130	54.9
5	0.8135	0.058	1.69347	53.2	11	-0.5290			
6	1.4000	0.113*							

0.113* = 0.060 + 0.053

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP (1ω)
	-0.0015	-0.0010	-0.00019	-0.0029	-0.3061	0.62	-2.34%
h 或 ω%	LA′	AH′	x_t	x_t'	$x_t' - x_s'$	K_T'	$F'_{0.7}$
100	0.0084	0.014	-0.0250	0.0034	-0.3284	-0.19	0.013
70	-0.0058	-0.0057	-0.016	-0.012	-0.0054	0.031	0.0038

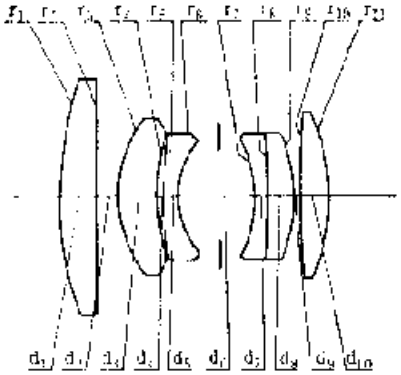




编号：02-00-031

大　孔　径　物　镜

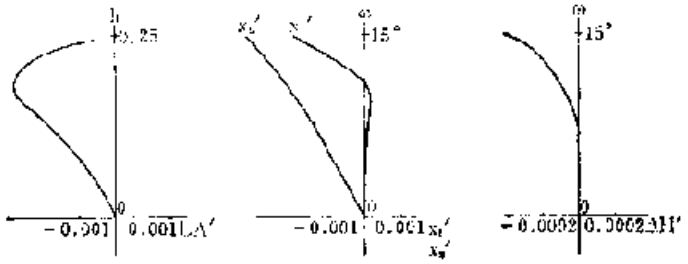
E. F. L＝1　　B. F. L＝0.606　　FNo. ＝2　　F. A. ＝±15°

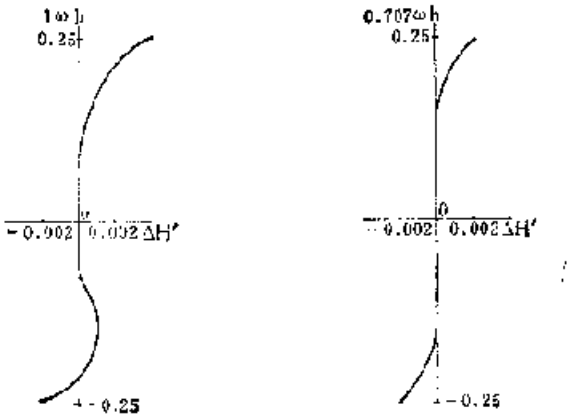


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	0.96154	0.1017	1.62554	57.9	7	0.32173	0.0321	1.66221	33.6
2	−11.85620	0.0569			8	−2.88460	0.0769	1.66151	50.6
3	0.32692	0.1119	1.62287	60.1	9	−0.43454	0.0100		
4	0.64529	0.0125			10	1.92310	0.0769	1.66151	50.6
5	1.10961	0.0467	1.65221	33.6	11	−0.69000			
6	0.25115	0.2115*							

0.2115* = 0.1000 + 0.1115

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QT (1ω)
	−0.0011	−0.000036	0.00045	−0.0011	−0.000026	0.365	−0.16%
h 或 ω%	LA′	ΔH′	x_1^*	x_2^*	$x_1^* - x_2^*$	K_{11}^*	$K_{T0.7}^*$
100	−0.00052	−0.00043	−0.0020	−0.0034	0.0014	0.0010	0.00068
70	−0.0028	−0.00010	0.00022	−0.0022	0.0024	−0.00053	−0.000016

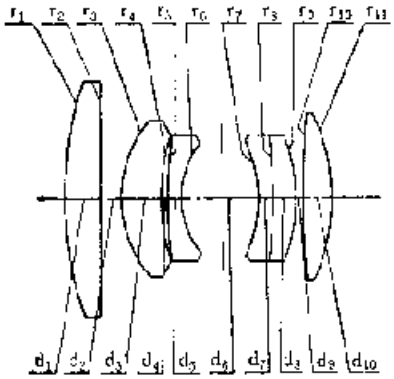




编号：02-00-032

大　孔　径　物　镜

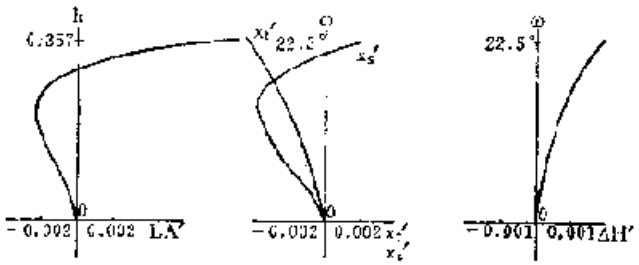
E. F. L = 1　　B. F. L = 0.6196　　FNo. = 1.4　　F. A. = ±22.5°

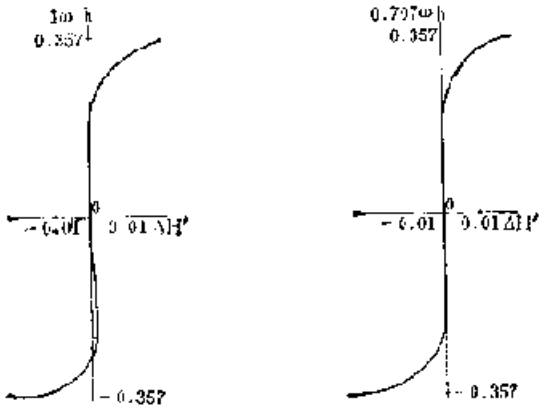


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	0.96154	0.1017	1.72056	47.7	7	− 0.24620	0.0321	1.76846	26.8
2	10.69580	0.0539			8	− 0.67310	0.0769	1.78990	48.0
3	0.41770	0.1119	1.78990	48.0	9	− 0.44880	0.0100		
4	0.34270	0.0200			10	2.91060	0.0846	1.78990	48.0
5	1.30770	0.0467	1.76846	26.8	11	− 0.61900	0.6188		
6	0.30370	0.2115*							

0.2115* = 0.1000 + 0.1115

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	− 0.0032	− 0.00023	0.00086	− 0.0043	0.0021	0.41	0.44%
h 或 ω%	LA′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}$
100	0.0092	0.0018	− 0.0056	0.0018	− 0.0074	− 0.00058	0.0016
70	− 0.0022	0.00037	− 0.0027	− 0.0039	0.0012	− 0.0034	0.00049

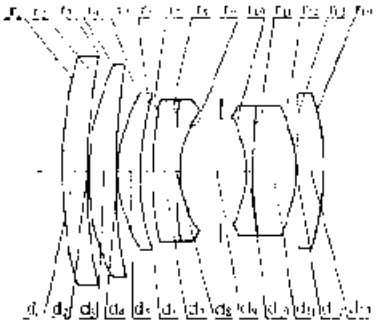




编号：02-00-033

扩展的高斯型大孔径物镜

E. F. L = 1　　B. F. L = 0.7114　　FNo. = 2.3　　F A. = ±22° **

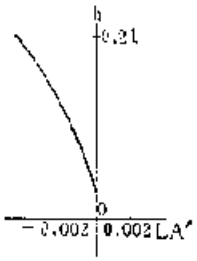


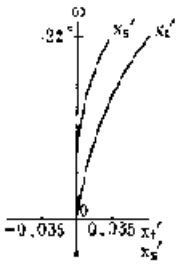
序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	1.300	0.0700	1.515		8	3.000	0.0150	1.805	
2	1.700	0.0010			9	0.300	0.1900*		
3	0.700	0.0800	1.700		10	0.280	0.0200	1.630	
4	3.000	0.0070			11	1.700	0.1200	1.730	
5	0.400	0.0700	1.630		12	0.400	0.0015		
6	0.750	0.0350			13	3.950	0.0730	1.741	
7	1.300	0.0630	1.770		14	−0.735			

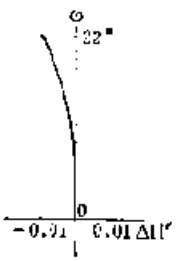
0.1900* = 0.1000 + 0.0900

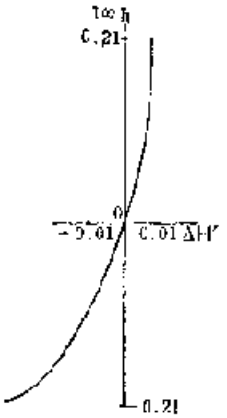
	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	OP(1ω)
	−0.00051	−0.0013	0.0024	0.0013	0.0032	0.399	−2.55%

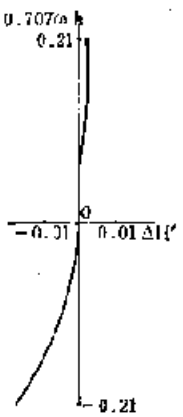
h 或 ω%	LA′	ΔH′	x_t	x_s	x'_t　x'_s	K'_{t1}	$K'_{t0.7}$
100	−0.0014	−0.010	0.071	0.030	0.041	−0.011	−0.0019
70	−0.0025	−0.0029	0.035	0.010	0.024	−0.0080	−0.0036







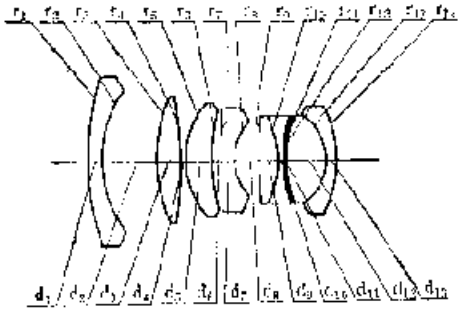




编号：02-00 034

大　孔　径　物　镜

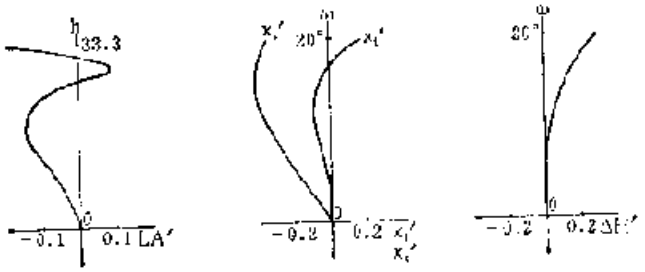
E. F. L＝100　　B. F. L＝68.16　　FNo. －1.5　　F. A. ＝±20°**

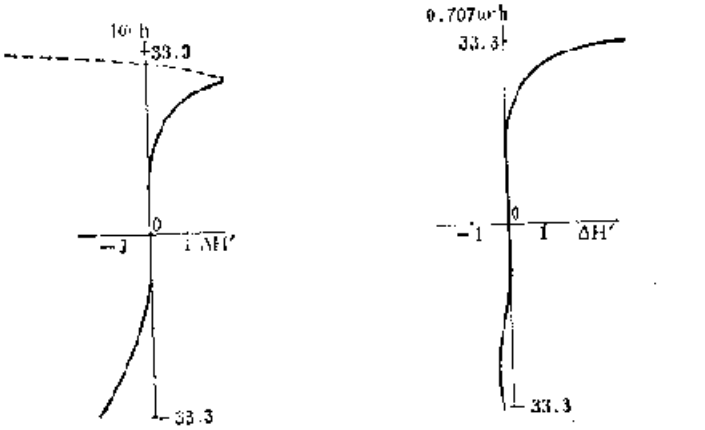


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	169.00	8.01	1.4978	67.1	8	35.64	14.31*		
2	67.97	33.20			9	337.90	11.06	1.6779	55.5
3	112.33	13.74	1.6947	53.6	10	－63.03	3.82	1.6302	35.3
4	－302.70	3.82			11	78.11	1.14		
5	53.38	16.79	1.5947	53.6	12	97.25	24.81	1.5947	53.6
6	119.20	4.77			13	－30.71	4.77	1.6204	60.3
7	∞	6.11	1.5002	35.3	14	－82.06			

14.31* = 8.00 + 6.31

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	Q_z'(1/m)
	－0.20	－0.14	0.081	－0.24	0.11	36.94	0.76%
h 或 ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{F1}'	$K_{F0.7}'$
100	0.19	0.28	0.17	－0.26	0.53		－0.036
70	－0.12	0.077	－0.099	－0.41	0.31	1.48	－0.031

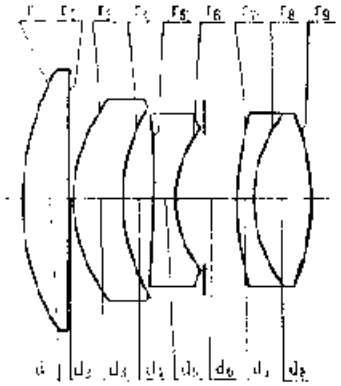




编号：02-00 035

摄　影　物　镜

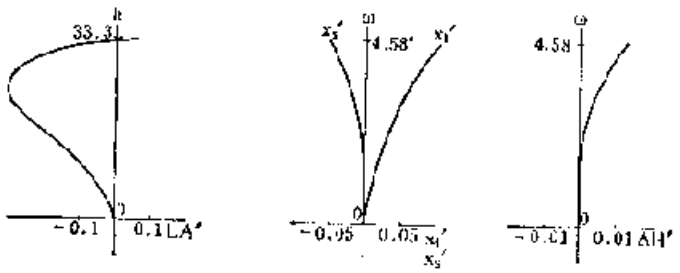
E. F. L＝100　　B. F. L＝41.55　　FNo. ＝1.5　　F. A. ＝±4.58°**

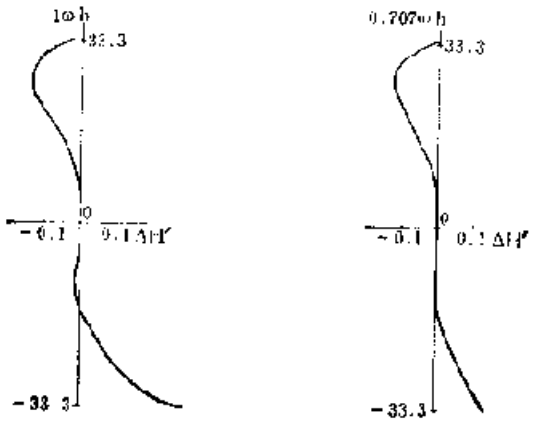


序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	70.01	12.72	1.6204	60.3	6	30.88	17.75*		
2	−751.28	0.69			7	95.41	4.08	1.6031	38.0
3	42.19	14.05	1.6204	60.3	8	39.10	15.78	1.6584	50.8
4	57.20	8.09			9	−71.15			
5	−722.95	6.21	1.7283	28.3					

17.75* = 7.90 + 9.85

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.23	−0.038	0.018	−0.029	0.0087	8	0.15%
h 或 ω%	LA′	Δ H′	x_t'	x_s'	$x_t' - x_s'$	K_{21}'	$K_{T0.7}'$
100	0.054	0.012	0.102	−0.048	0.150	0.12	−0.030
70	−0.30	0.0049	0.055	−0.024	0.079	0.056	0.030

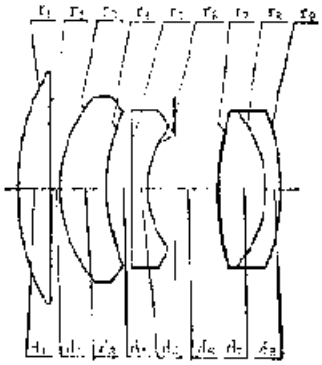




编号：02-00-036

摄　影　物　镜

E. F. L＝100　　B. F. L＝46.82　　FNo. ＝1.5　　F. A. ＝±4.58° **

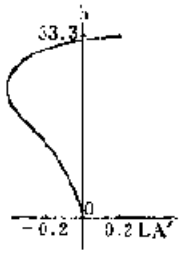


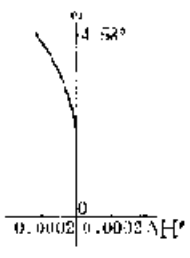
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	67.77	12.25	1.6031	60.7	6	29.77	20.90*		
2	−753.45	0.66			7	89.09	15.20	1.6584	50.8
3	41.20	14.10	1.6204	60.3	8	−34.00	3.94	1.5814	40.8
4	55.09	7.79			9	−70.63			
5	−707.41	4.85	1.7400	28.2					

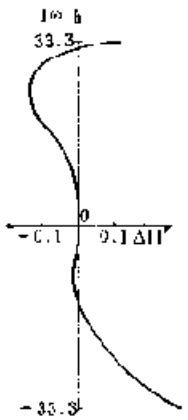
20.90* = 8.00 + 12.90

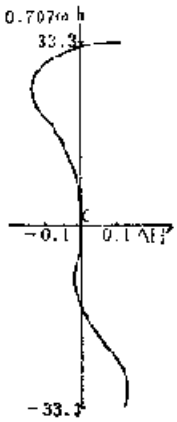
	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	CP (1 ω)
	−0.33	−0.040	0.021	−0.028	−0.00009	8	0.005%

h 或 ω%	LA′	ΔH′	x_t	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.22	0.00024	0.140	−0.031	0.171	0.20	−0.034
70	−0.13	−0.00005	0.076	−0.016	0.092	0.12	−0.023





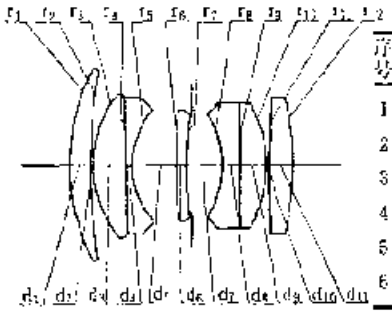




编号：02-00-037

摄　影　物　镜

E. F. L＝ 1　　B. F. L＝0.692　　FNo. － 2　　F. A. －±25°

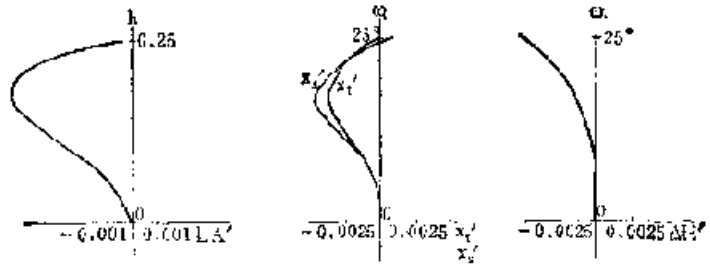


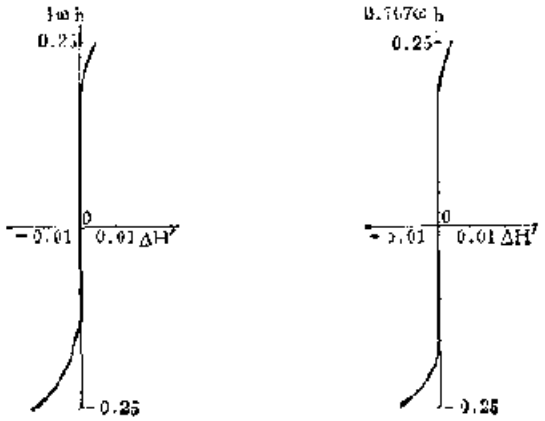
面号	r	d	n_D	ν	面号	r	d	n_D	ν
1	0.35181	0.03695	1.74400	44.90	7	1.17285	0.10633*		
2	1.75485	0.00384			8	－0.30730	0.05907	1.72825	28.34
3	0.35799	0.09943	1.62041	60.29	9	－5.96331	0.07876	1.74400	44.90
4	7.61699	0.01477	1.58144	40.80	10	－0.40725	0.00384		
5	0.25514	0.13783			11	3.70875	0.07876	1.74400	44.90
6	1.78127	0.02954	1.62004	36.34	12	－0.89225			

0.10633* = 0.00100 + 0.10533

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	QP(1ω)
	－0.0014	0.000056	0.00016	－0.0022	－0.0014	0.46	－1.23%

h 或 ω%	LA′	ΔH′	x_1'	x_2'	$x_2' - x_3'$	K_{T1}'	$K_{T0.7}'$
100	－0.00034	－0.0057	－0.00026	0.00350	－0.00076	－0.0057	－0.0017
70	－0.0034						

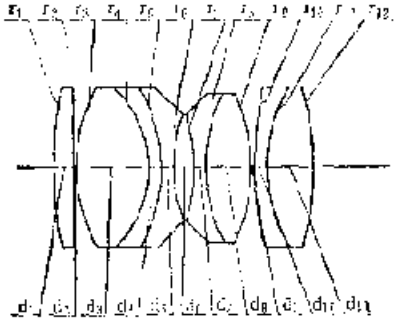




编号：02-00-038

大　孔　径　物　镜

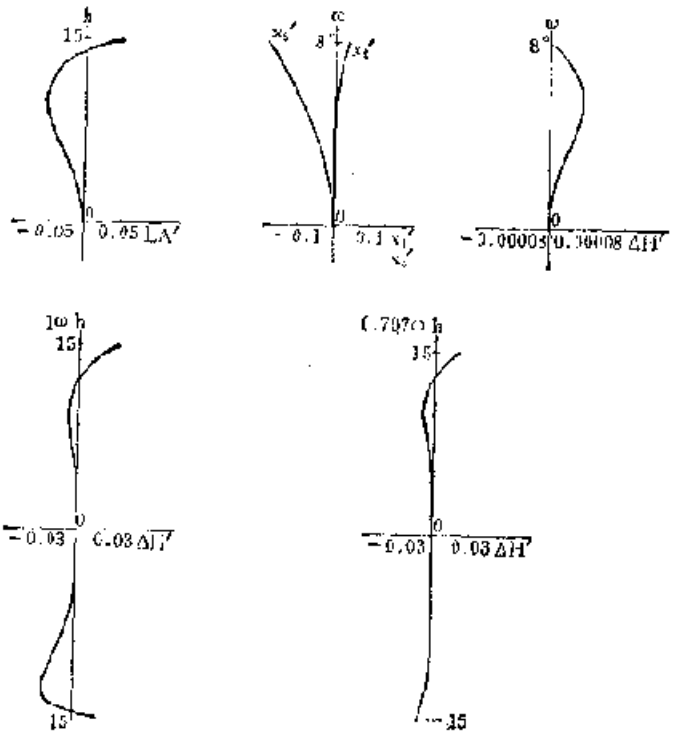
E. F. L＝60　　B. F. L＝34.2　　FNo. ＝2　　F. A. ＝±8°**



序号	r	d	nD	νD	序号	r	d	nD	νD
1	78.94	4.00	1.7174	29.5	7	−34.32	2.50	1.6200	36.3
2	∞	0.20			8	29.02	3.50	1.6200	60.3
3	33.61	15.10	1.6200	38.0	9	−37.55	0.20		
4	−21.22	3.50	1.6148	51.1	10	61.24	2.50	1.7174	29.5
5	−32.22	2.50	1.7174	29.5	11	29.02	3.30	1.6200	60.3
6	24.62	4.00*			12	−68.09			

4.00* = 2.00 + 2.00

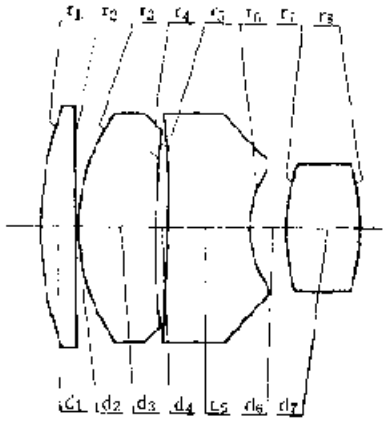
	ΣS₁	ΣS₂	ΣS₃	ΣS₄	ΣS₅	HI	QP(1ω)
	−0.031	−0.0028	0.013	−0.039	0.00023	8.45	0.0001%
视场 ω%	LA′	Δ¹l′	x_t	x_s'	$x_t'-x_s'$	K_{21}^{*}	$K_{710.7}$
100	0.050	0.000009	0.025	−0.194	0.219	0.028	−0.010
70	−0.056	0.00008	0.0082	−0.100	0.108	0.0035	−0.0075



编号：02-00-039

四　片　式　物　镜

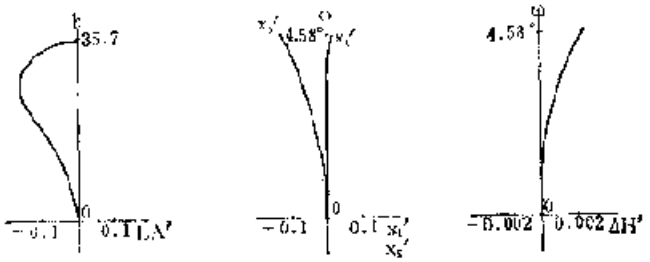
E. F. L＝100　　B. F. L＝38.84　　FNo. ＝1.4　　F. A. ＝±4.58°**

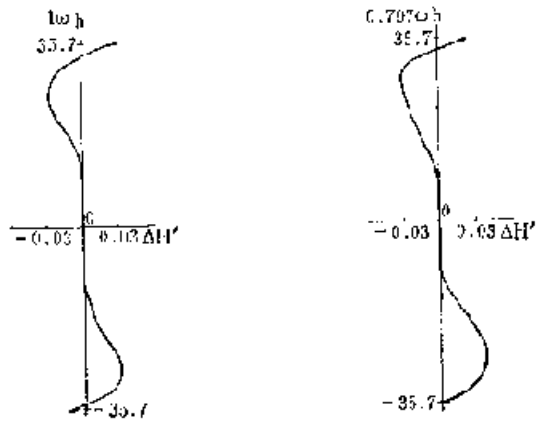


序号	r	d	n_d	ν	序号	r	d	n_d	ν
1	132.34	11.73	1.62061	30.3	5	-531.10	28.12	1.72825	28.3
2	3619.00	0.77			6	36.23	12.27*		
3	60.83	27.31	1.65160	58.5	7	84.94	26.57	1.71300	53.9
4	327.30	3.12			8	-85.80			

12.27* = 6.00 + 6.27

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HJ	QP(1ω)
	0.12	0.00043	0.017	-0.051	0.0020	8	0.027%
h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	Σ_{T1}'	$K_{T0.7}'$
100	-0.0092	0.0022	0.0084	-0.131	0.139	0.0097	-0.00055
70	-0.16	0.00090	0.0032	-0.066	0.069	0.0089	0.0012

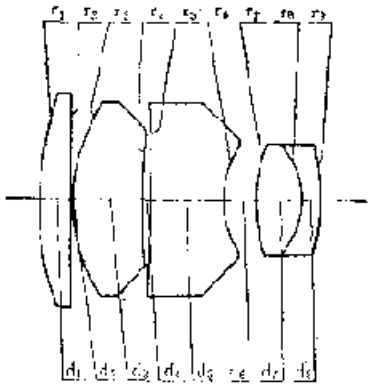




编号：02-00-040

四　组　元　物　镜

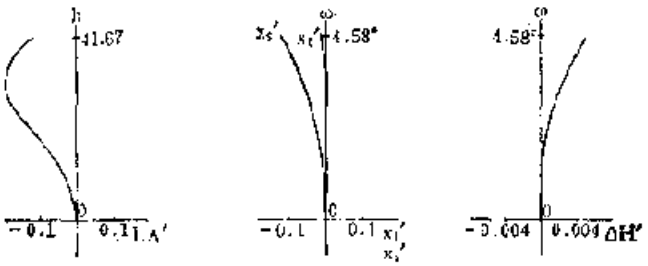
E. F. L＝100　　B. F. L＝38.35　　FNo. ＝1.2　　F. A. ＝±4.58°**

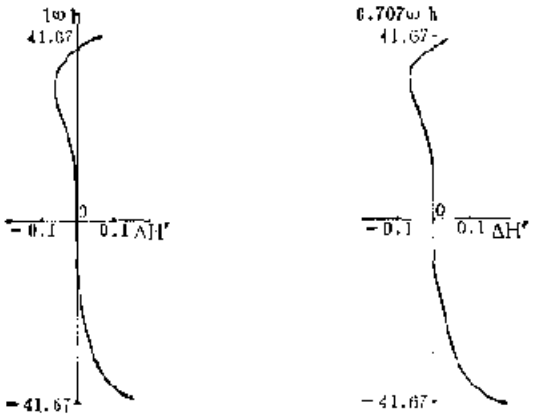


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	128.13	11.83	1.62061	60.3	6	34.74	11.83*		
2	3488.00	0.74			7	64.36	17.25	1.71300	53.9
3	64.51	20.61	1.65830	57.3	8	−31.15	7.39	1.65850	57.3
4	307.60	3.01			9	−103.49			
5	−534.30	27.11	1.72832	28.3					

11.83* = 6.00 + 5.83

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.23	−0.0045	0.019	0.003	0.00∠0	8	0.062%
h 或 ω%	L_A'	$\Delta H'$	x_t'	x_s'	x_t' x_s'	K_T'	$K_{T0.7}'$
100	−0.12	0.0049	−0.011	−0.120	0.109	0.18	−0.0077
70	−0.20	0.0038	−0.0068	−0.064	0.056	0.11	−0.0034

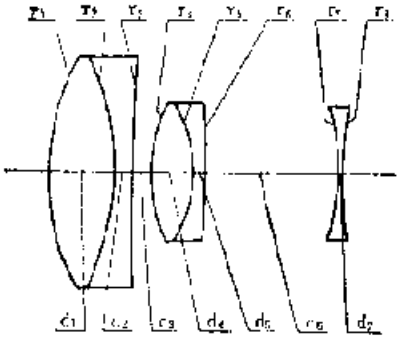




编号：02-00-041

用于摄影或放映的物镜

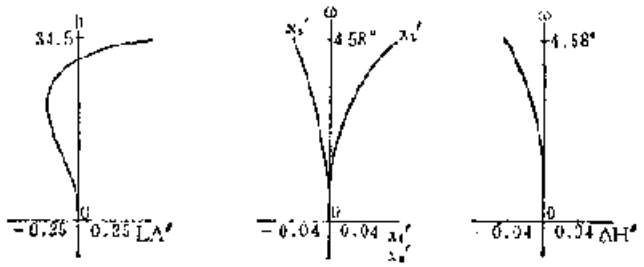
E. F. L＝94　　B. F. L＝－1.85　　FNo. ＝1.45　　F. A. ＝±4.58°**

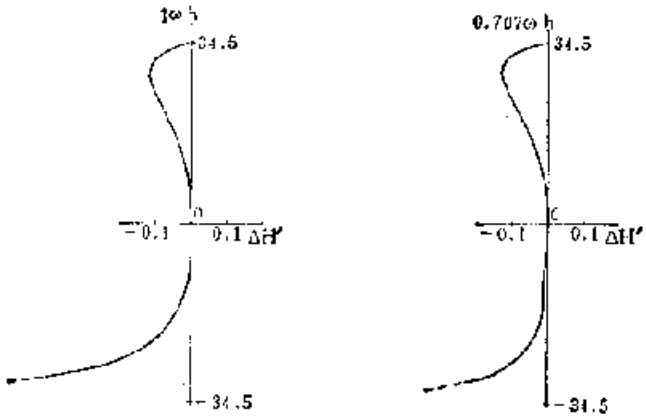


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	70.91	19.00	1.6625	50.9	5	－42.72	3.50	1.6166	36.6
2	－81.41	5.50	1.6989	30.1	6	－589.33	40.00		
3	677.10	65.00*			7	75.93	1.35	1.5171	64.1
4	51.37	12.10	1.6932	53.1	8	138.26			

65.00* ＝26.00＋39.00

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QF(1ω)
	－0.27	－0.023	0.014	－0.026	－0.030	7.54	－0.56%
λ或ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K'_{t_1}	$K'_{r_{0.7}}$
100	0.51	－0.042	0.078	－0.040	0.118	－0.32	－0.12
70	－0.24	－0.015	0.035	0.021	0.056	－0.35	－0.084

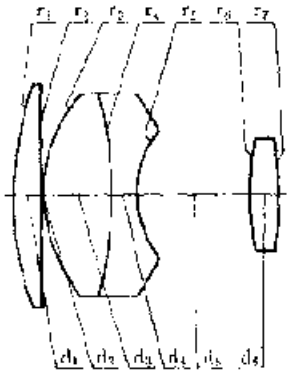




编号：02-00-042

用于摄影、电影摄影和放映的大孔径物镜

E.F.L=1　　B.F.L=0.368　　FNo.=1.4　　F.A.=±4.58°**

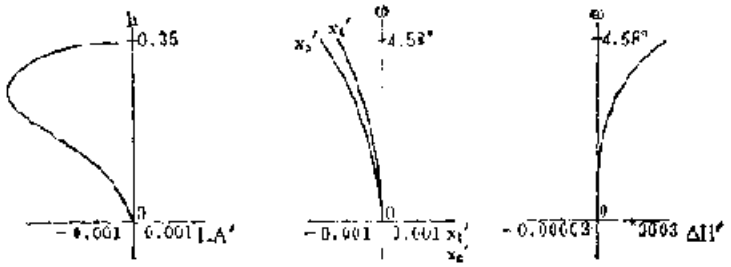


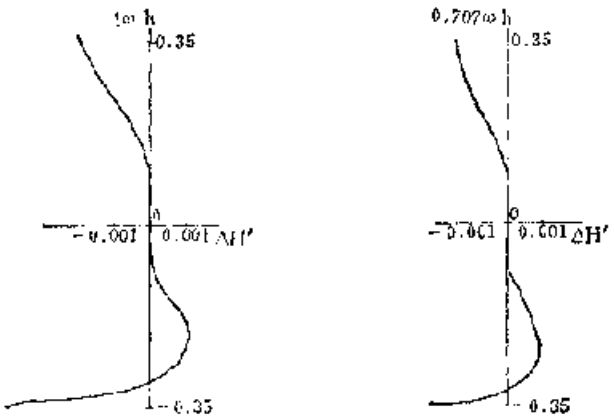
序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	1.04000	0.10000	1.74400	44.90	5	0.36840	0.38000*		
2	11.62800	0.00200			6	0.89876	0.10000	1.74400	44.90
3	0.32034	0.24000	1.63854	55.43	7	−1.76742			
4	−1.34239	0.08000	1.76182	26.52					

0.38000* = 0.19000 + 0.19000

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	QP(1ω)
	−0.0027	0.00027	0.000051	−0.00050	0.000044	0.95	0.068%

h 或 ω %	$\Sigma A'$	$\Delta H'$	x_t'	x_s'	$x_t'-x_s'$	K_{T1}	$K_{T0.7}$
100	−0.00042	0.000055	−0.0012	−0.0017	0.00051	−0.0028	−0.00013
70	−0.0035	0.000029	−0.00084	−0.00098	0.00021	−0.0018	−0.000060

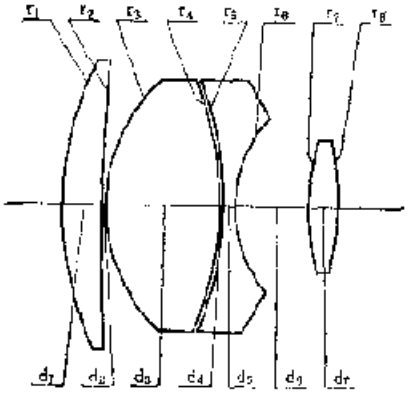




编号：02-00-043

用于摄影、电影摄影和放映的大孔径物镜

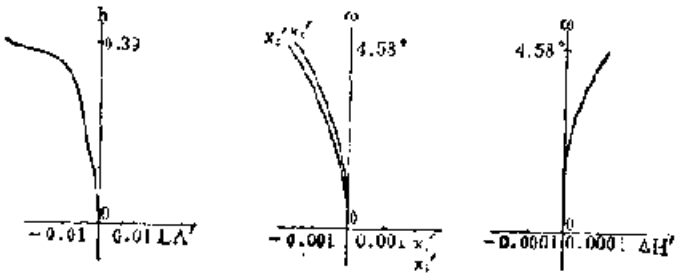
E. F. L＝1　　B. F. L＝0.424　　FNo. ＝1.3　　F. A. ＝±4.58°**

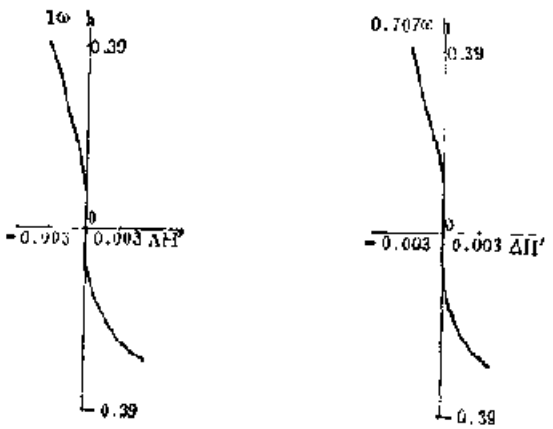


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	1.02060	0.12000	1.78443	43.77	5	−1.10030	0.05000	1.78470	26.10
2	4.68920	0.00300			6	0.38535	0.22500*		
3	0.51855	0.35000	1.53996	59.66	7	0.90790	0.08000	1.78443	43.77
4	−1.10030	0.00300			8	1.38005			

0.22500* = 0.10000 + 0.12500

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HT	QF(1ω)
	−0.0052	0.00043	0.000027	−0.00057	0.00010	0.08	0.15%
h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{0.7}'$
100	−0.026	0.00012	−0.0015	−0.0017	0.00018		0.0017
70	−0.0066	0.000045	−0.00079	−0.00088	0.000094		0.00090

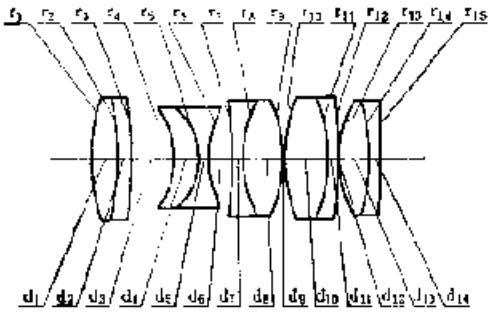




编号：02-C0-044

消球差、色差、象散和彗差的大孔径摄影物镜

E. F. L＝100　　B. F. L＝66.8　　FNo. ＝0.9　　F. A. ＝±13°

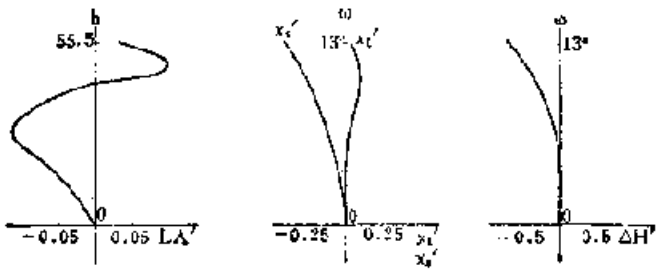


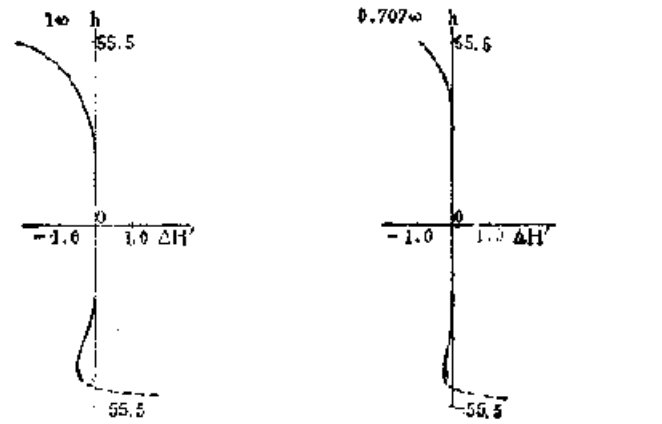
序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	212.20	23.48	1.74400	44.9	9	−139.08	1.56		
2	237.30	11.74	1.64769	33.9	10	180.00	30.00	1.71300	53.9
3	−548.30	37.56			11	−156.50	9.40	1.74077	27.7
4	−82.90	21.12	1.74077	27.7	12	−612.20	1.56		
5	−57.44	9.40	1.58144	40.8	13	119.12	25.06	1.71300	53.9
6	105.50	21.12*			14	−203.10	9.40	1.74077	27.7
7	−323.70	9.40	1.67270	32.2	15	−1306.00			
8	116.76	34.44	1.71300	53.9					

21.12* = 10.00 − 11.12

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1∞)
	−0.51	0.20	0.23	−0.50	0.81	22.36	−3.36%

h 或 ω %	LA′	AH′	x_t'	x_s'	x_t' x_s'	K_{T1}'	$K_{T0.7}'$
100	0.024	−0.73	0.025	−0.430	0.455		−0.42
70	−0.357	−0.26	0.083	−0.240	0.323		−0.10

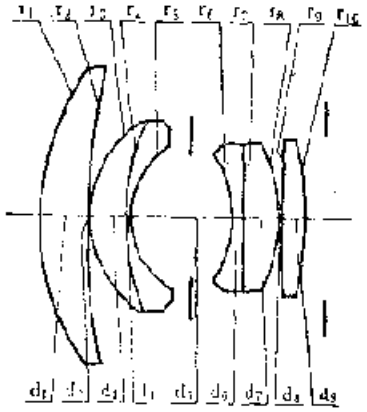




编号：02-00-045

大 孔 径 摄 影 物 镜

E. F. L＝1　　B. F. L＝0.63564　　FNo. ＝1.9　　F. A. ＝±24°

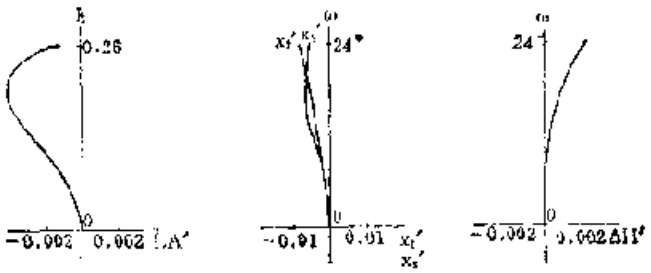


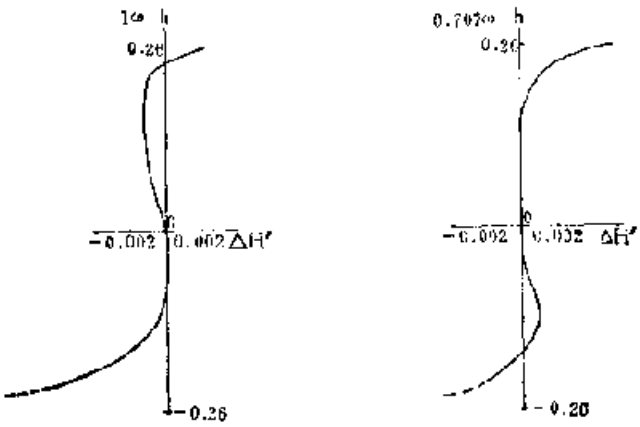
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	0.73853	0.12463	1.72000	50.31	6	-0.31542	0.03565	1.59395	30.05
2	2.26732	0.00103			7	-5.25016	0.09698	1.60100	54.80
3	0.31446	0.09804	1.65830	57.29	8	-0.39150	0.00034		
4	0.62268	0.01642	1.65446	33.79	9	5.42413	0.05081	1.74000	28.30
5	0.23655	0.27818*			10	-0.82023			

0.27818* = 0.18000 + 0.09818

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QF(1ω)
	0.0017	0.00077	0.000009	-0.0028	0.0014	0.46	0.19%

h或ω%	'LA'	ΔH'	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{0.7}'$
100	-0.0012	0.0021	-0.0089	-0.0075	-0.0014	-0.0080	-0.0018
70	-0.0010	0.00082	-0.0064	-0.0074	0.0010	-0.0019	-0.00007

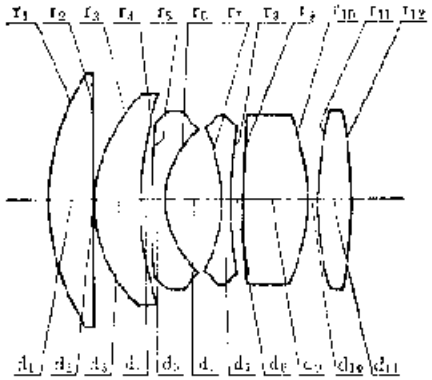




编号：02-00-046

六　片　式　物　镜

E. F. L＝100　　B. F. L＝56.6　　FNo.＝1.6　　F. A. ＝16.5°**

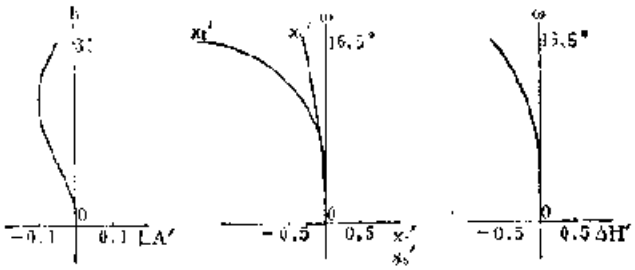


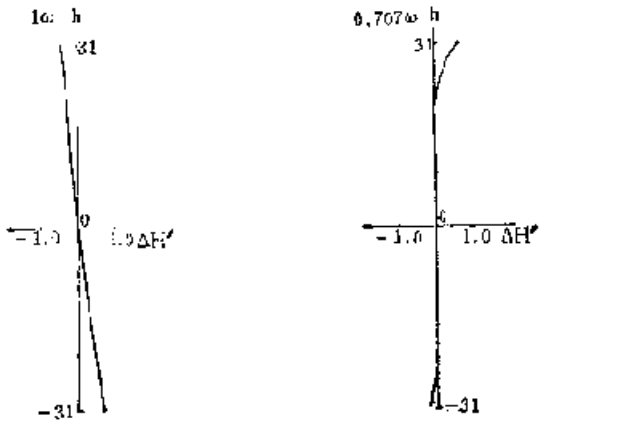
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	60.741	12.76	1.6203	60.2	7	−44.588	2.68	1.7270	28.5
2	4029.080	0.13			8	174.265	3.57		
3	39.690	12.06	1.6054	60.4	9	305.105	17.73	1.6242	46.9
4	93.753	2.42			10	57.444	2.55		
5	203.534	3.57	1.6057	38.0	11	88.353	9.57	1.6203	60.2
6	21.899	15.05*			12	−112.535			

15.05* = 8.50 + 6.55

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QP(1ω)
	−0.080	−0.045	0.002	0.17	−0.27	28.76	−2.37%

1ω或ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_T'	$K_{T0.7}'$
100	−0.048	−0.68	−1.76	−0.26	−1.50	0.052	−0.040
70	−0.10	−0.19	−0.33	−0.21	−0.12	0.16	−0.024

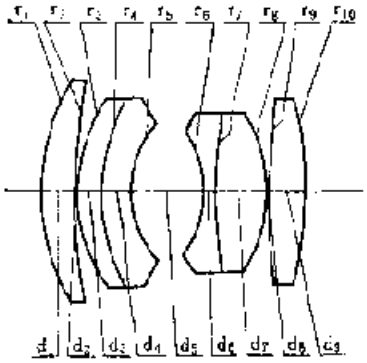




编号：02-00-047

摄　影　物　镜

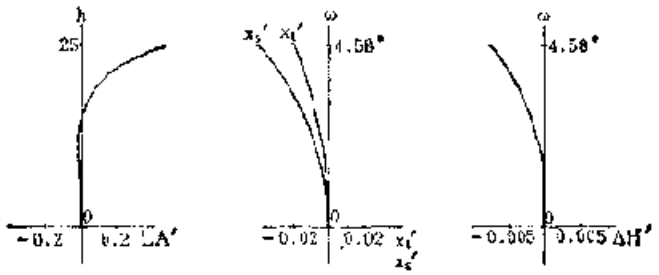
E F L＝101　　B. F. L＝73.7　　FNo. ＝2　　F. A. ＝＋4.58°**

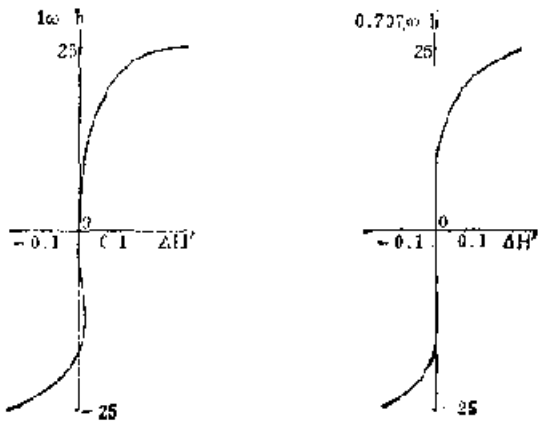


序号	r	d	nD	ν	序号	r	d	nD	ν
1	57.9	9.2	1.66200	56.1	6	−30.1	3.8	1.80156	35.2
2	174.9	0.2			7	137.9	14.1	1.66200	56.1
3	43.5	6.7	1.66200	56.1	8	−42.8	0.3		
4	53.5	8.4	1.67246	32.5	9	227.3	9.5	1.66200	56.1
5	26.7	19.9*			10	−96.0			

19.9* = 10.0 + 9.9

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QPC(ω)
	−0.026	0.0063	0.0013	−0.0066	−0.0035	8	−0.089%
h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	K_{T7}'
100	0.40	0.0072	0.021	−0.042	0.021	0.047	0.321
70	0.035	−0.0025	−0.010	−0.021	0.011	0.036	0.015

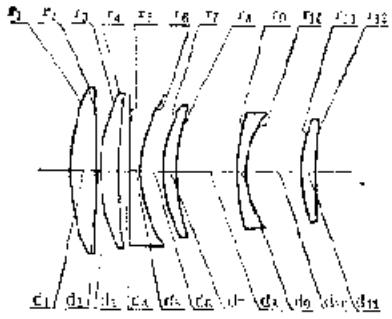




编号：02-00-018

远　摄　物　镜

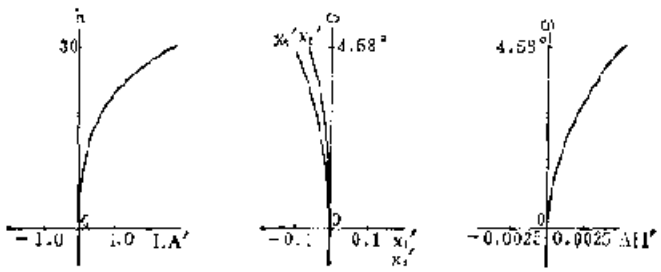
E. F. L＝122　　B. F. L＝47.5　　FNo. ＝1.9　　F. A. ＝±4.58°**

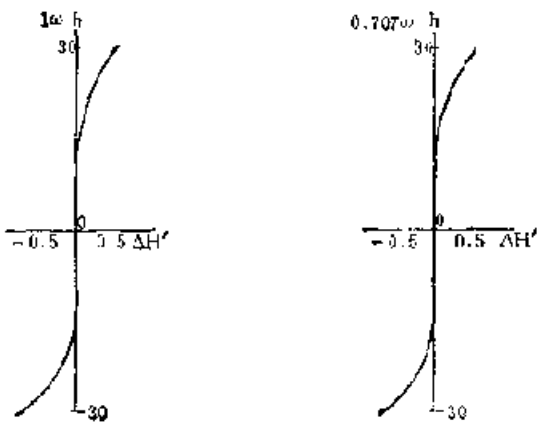


序号	r	d	nD	ν	序号	r	d	nD	ν
1	61.96	8.00	1.64771	52.8	7	39.35	4.00	1.60738	56.7
2	−240.70	0.27			8	60.02	18.67*		
3	49.30	6.67	1.60729	59.5	9	67.40	2.67	1.74080	28.0
4	200.10	3.07			10	27.21	17.34		
5	∞	3.33	1.64769	33.9	11	43.00	4.00	1.64769	33.9
6	40.50	6.67			12	202.50			

18.67* = 9.00 + 9.67

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	CI'(1ω)
	0.11	0.0035	0.0023	−0.014	0.0034	5.6	0.062%
h 或 ω %	LA'	AII'	x'_1	x'_2	$x'_1 - x'_2$	K'_{T1}	$K'_{D.T}$
100	2.68	0.0051	−0.062	−0.098	0.036	−0.13	−0.015
70	0.84	0.0022	−0.031	−0.050	0.019	−0.099	−0.014

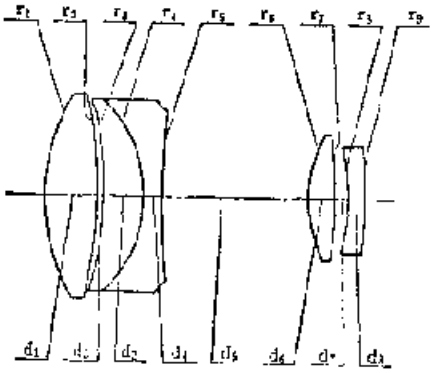




编号：02-00-049

消色差、球差、象散和彗差的大孔径达尔美尔型摄影物镜

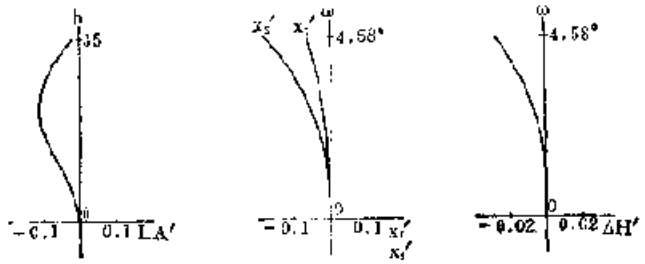
E. F. L＝100　　B. F. L＝36.5　　FNo.＝1.4　　F. A.＝±4.58°**

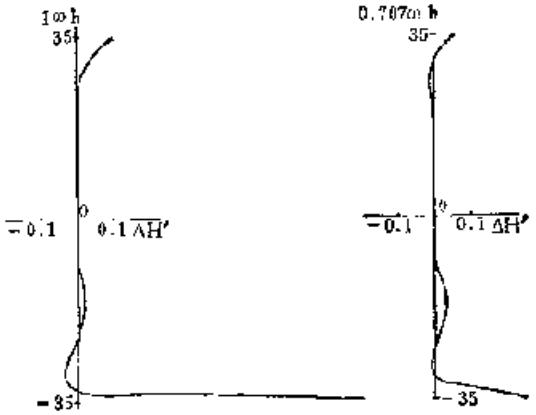


序号	r	d	n_D	v	序号	r	d	n_D	v
1	73.69	19.28	1.6073	59.5	6	56.58	9.64	1.6516	58.5
2	−179.64	3.80			7	131.21	5.69		
3	−120.30	13.77	1.7408	28.0	8	−71.62	5.51	1.7408	28.0
4	−46.75	6.88	1.7174	29.5	9	−305.78			
5	373.09	55.10*							

55.10* = 25.00 + 30.10

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QF(1ω)
	−0.14	0.018	0.015	−0.063	−0.019	8	−0.36%
h 或 ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{T0.7}'$
100	−0.076	+0.029	−0.062	−0.192	0.130	0.47	−0.0097
70	−0.13	+0.010	−0.034	−0.098	0.064	0.15	−0.0044

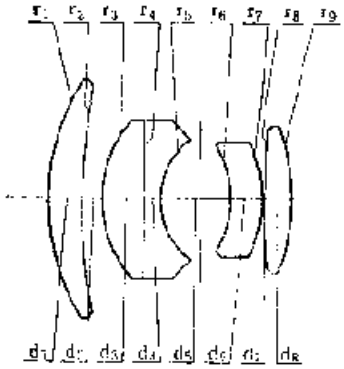




编号：02-00-050

摄影及放映用的大孔径物镜

E. F. L＝1　　B. F. L＝0.579　　FNo. －2.5　　F. A. ＝±13.5°

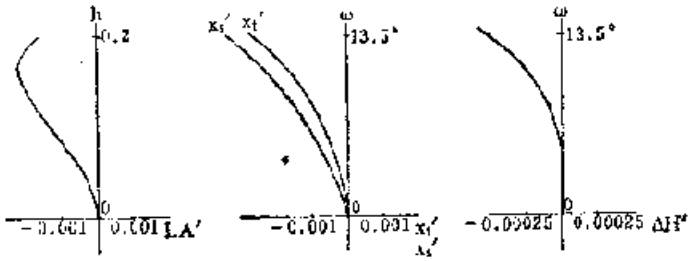


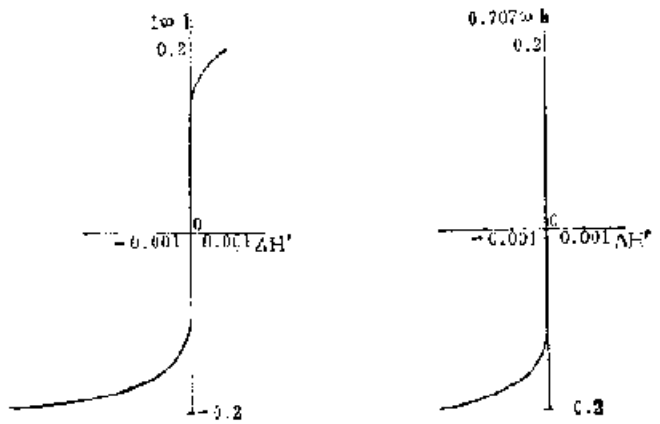
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	0.8010	0.0931	1.658	50.8	6	－0.2739	0.0783	1.755	27.5
2	1.8430	0.0521			7	－0.4078	0.0094		
3	0.3211	0.1118	1.658	50.8	8	2.2670	0.0699	1.639	55.5
4	∞	0.0480	1.673	32.2	9	－0.5249			
5	0.2100	0.1934*							

0.1934* = 0.1000 + 0.0934

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	QP(1ω)
	－0.00047	0.000047	0.000091	－0.00044	－0.000058	0.23	－0.24%

h 或 ω%	$L\Delta'$	$\Delta H'$	x_t'	x_s'	$x_t' - x_s'$	K_{T_1}	$K_{T_{0.7}}'$
100	－0.0017	－0.00056	－0.0027	－0.0033	0.00059	－0.0020	－0.00013
70	－0.0020	－0.00012	－0.0012	－0.0019	0.00077	－0.0015	－0.00013

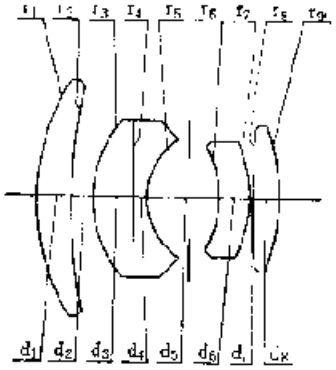




编号：02-00-051

摄影及放映用的大孔径物镜

E. F. L＝1　　B. F. L＝0.564　　FNo. ＝2　　F. A. ＝＋22.5°

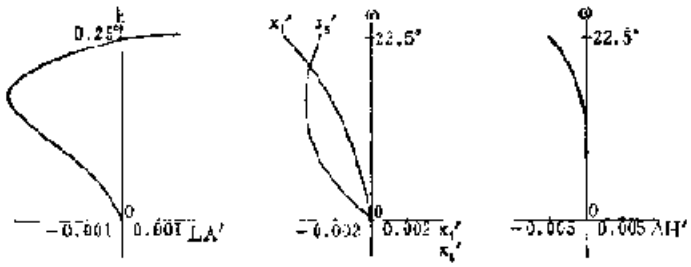


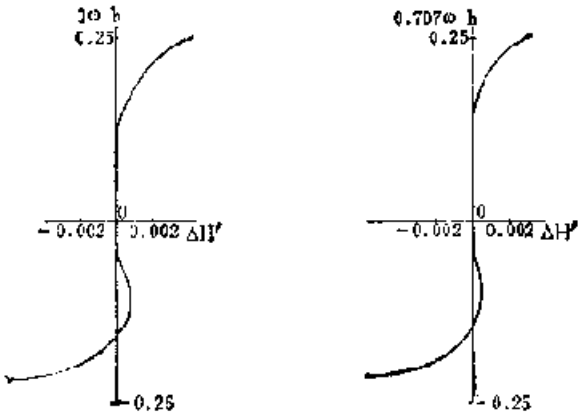
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	0.5379	0.0048	1.744	44.9	6	－0.2665	0.0673	1.755	27.5
2	1.1950	0.0577			7	－0.3913	0.0192		
3	0.8260	0.1138	1.717	47.9	8	7.0923	0.0712	1.713	53.9
4	1.9231	0.0173	1.728	28.7	9	－0.5150			
5	0.2263	0.2212*							

0.2212* － 0.1100 ＋ 0.1112

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QT(jω)
	－0.0015	0.00017	0.00027	－0.0018	0.00337	0.41	－1.21%

h 或 ω %	$\Delta A'$	$\Delta H'$	x_t'	x_s'	$x_t' - x_s'$	K_{T_t}	$K_{T_{0.7}}$
100	0.0017	－0.0050	－0.0047	－0.0033	－0.0017	－0.010	－0.00016
70	－0.0032	－0.00361	－0.0027	－0.0041	0.0014	－0.0084	－0.00055

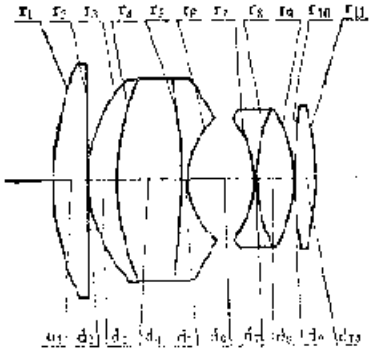




编号：02-00-052

四组元大孔径高斯物镜

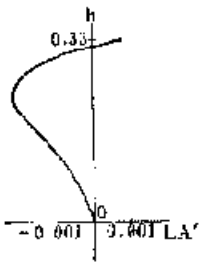
E.F.L＝1　　B.F.L＝0.527　　FNo.＝1.5　　F.A.＝±15°

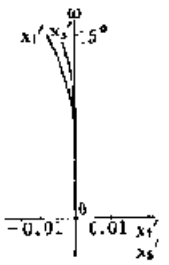


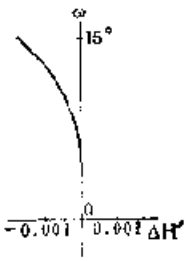
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	0.827	0.105	1.6228	56.9	7	−0.310	0.016	1.5317	48.9
2	9.500	0.002			8	0.572	0.103	1.6084	56.8
3	0.440	0.085	1.6285	55.5	9	0.440	0.002		
4	0.800	0.150	1.5163	64.0	10	1.500	0.060	1.6385	55.5
5	−1.800	0.020	1.6689	31.1	11	−0.846			
6	0.252	0.190*							

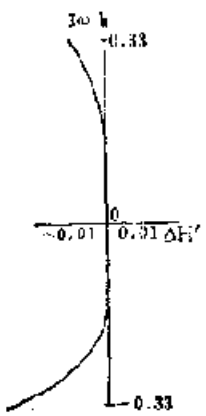
0.190* = 0.100 + 0.090

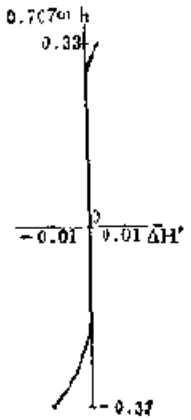
	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QT(1ω)
	−0.0020	0.00053	0.00010	−0.0013	−0.00028	0.26	−0.66%
或ω=	LA′	ΔH′	x_1'	x_2'	$x_t'-x_s'$	K'_{T1}	$K'_{0.7}$
	−0.00088	−0.0017	−0.0076	−0.0024	−0.0052	−0.017	−0.0037
	−0.0024	−0.00038	−0.0028	−0.0020	−0.0038	−0.0039	−0.0010







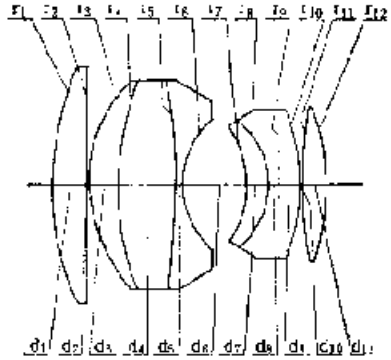




编号：02-00-053

四组元大孔径高斯物镜

E. F. L＝1.03　　B. F. L＝0.578　　FNo. ＝1.4　　F. A. ＝±12.5°

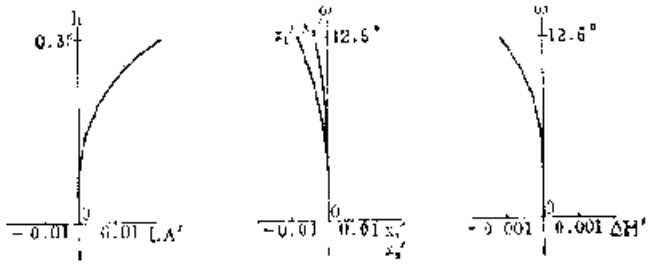


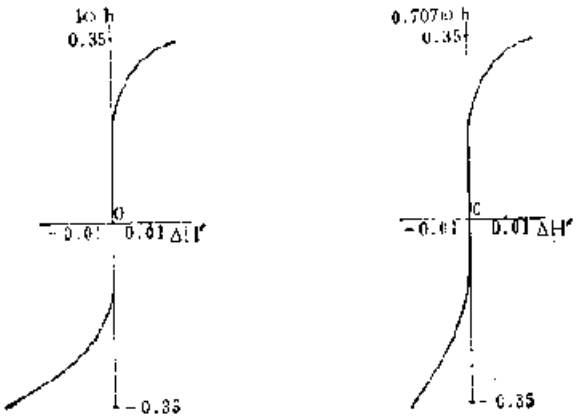
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	0.855	0.105	1.6204	60.3	7	−0.304	0.069	1.5891	61.2
2	∞	0.002			8	−0.227	0.039	1.5263	51.0
3	0.440	0.085	1.6385	55.5	9	−5.710	0.058	1.6385	55.5
4	0.900	0.178	1.5163	64.0	10	−0.539	0.003		
5	−1.790	0.020	1.6727	32.2	11	1.300	0.068	1.6385	55.5
6	0.247	0.190*			12	−0.689			

0.190* − 0.100 + 0.090

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	QF(1ω)
	0.0013	−0.00034	−0.00014	−0.00053	−0.00031	0.23	−0.52%

h 或 ω %	LA′	AH′	x_1^s	x_3^s	$x_5^s - x_3^s$	K_{T1}^s	$K_{T0.7}^s$
100	0.023	−0.0012	−0.0063	0.0018	0.0065	−0.0057	−0.0033
70	0.0063	−0.00035	−0.0031	−0.0012	−0.0019	0.00086	−0.0016

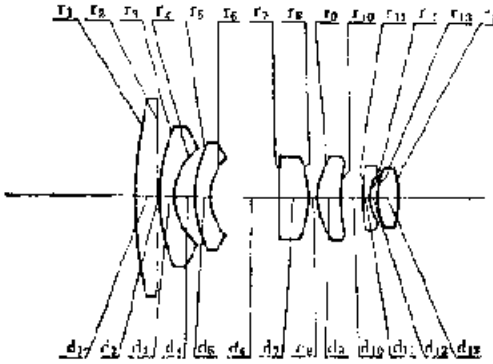




编号：02-00-054

具有负前组的大孔径物镜

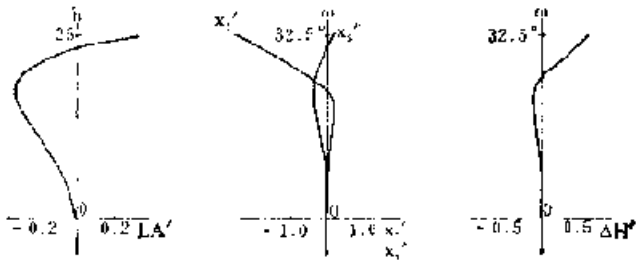
E. F. L＝100　　B. F. L＝124.8　　FNo. ＝2　　F. A. ＝±32.5°

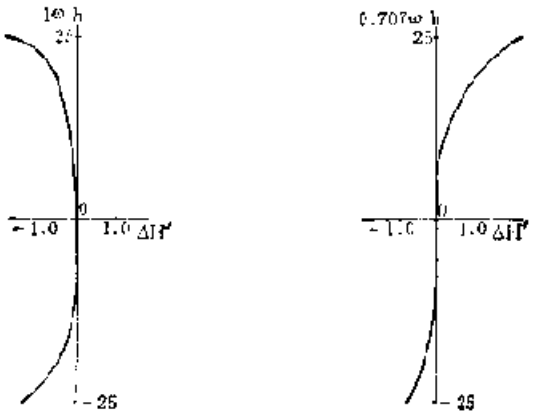


序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	645.25	32.3	1.7174	29.5	8	−135.10	14.0		
2	∞	5.0			9	161.05	37.0	1.5687	62.1
3	289.25	21.0	1.5587	63.1	10	250.15	32.0*		
4	89.04	32.0			11	246.20	9.5	1.8052	25.5
5	186.75	21.0	1.5822	42.0	12	66.15	10.8		
6	80.17	105.1			13	102.94	32.0	1.6779	55.5
7	885.60	44.6	1.5587	63.1	14	−196.14			

32.0* = 16.0 + 15.0

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.16	0.28	−0.19	−0.20	−0.10	62.69	1.01%
h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{TC.7}'$
100	0.34	0.63	2.82	0.11	2.68	1.73	0.45
70	0.35	−0.081	0.14	0.08	0.49	0.74	0.26

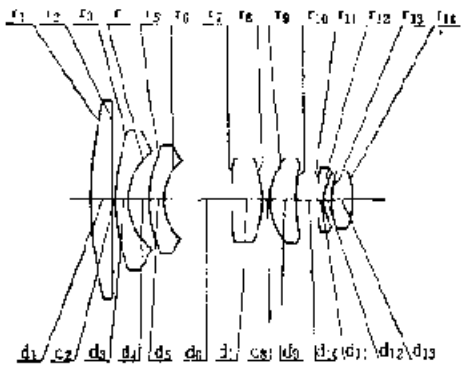




编号：02-00-055

具有负前组的大孔径物镜

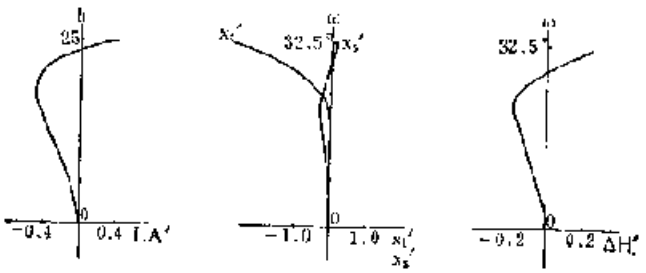
E. F. L＝100　　B. F. L＝129.7　　FNo. ＝2　　F. A. ＝±32.5°

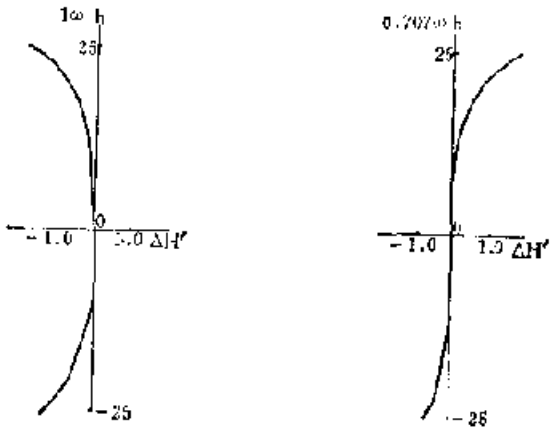


序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	737.70	30.5	1.6052	25.5	8	−170.10	9.0		
2	∞	5.0			9	108.12	38.0	1.6200	60.3
3	359.05	21.5	1.5225	59.1	10	249.10	35.0*		
4	91.04	35.7			11	371.08	8.5	1.6052	25.5
5	182.45	21.5	1.6477	33.9	12	70.42	9.5		
6	83.82	108.0			13	103.10	31.0	1.6935	53.6
7	1261.55	46.0	1.6200	60.3	14	−174.95			

35.0* = 17.5 + 17.5

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.21	0.20	−0.004	−0.16	−0.31	62.72	0.38%
h 或 ω %	L.A'	A.H'	x_1'	x_5'	$x_1' - x_5'$	K_{T1}'	$K_{T0.7}'$
100	0.43	0.21	−2.73	0.11	−2.84	−1.68	−0.49
70	−0.30	0.19	0.031	0.281	0.250	0.57	0.13

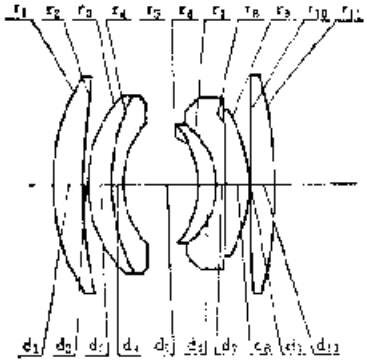




编号：02-00-056

大 孔 径 摄 影 物 镜

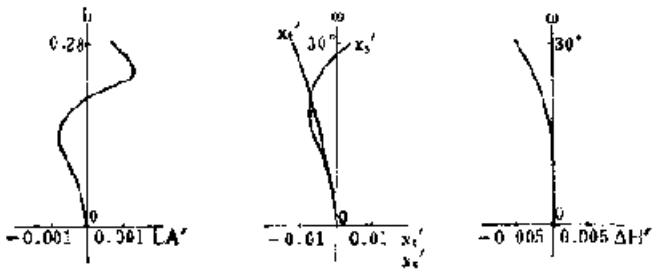
E.F.L＝1.05　　B.F.L＝0.725　　FNo.－1.8　　F.A.＝±30°

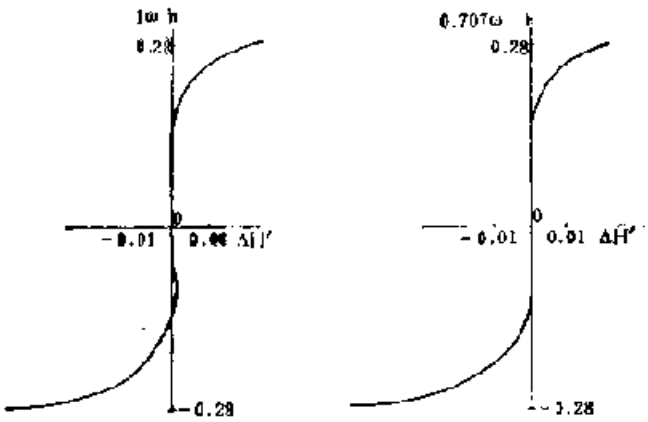


序号	r	d	nD	νD	序号	r	d	nD	νD
1	0.579	0.097	1.6534	50.8	7	－0.215	0.026	1.5760	41.3
2	1.787	0.005			8	－3.299	0.069	1.6779	55.3
3	0.369	0.079	1.6534	50.8	9	－0.422	0.001		
4	0.573	0.032	1.6987	30.1	10	4.259	0.083	1.6395	55.5
5	0.267	0.230*			11	－1.057			
6	－0.297	0.055	1.6204	60.3					

0.230* = 0.120 + 0.110

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	QP(1ω)
	－0.00089	－0.00074	0.00063	－0.0043	－0.00082	0.60	－0.85%
h 或ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_T'	$K_{10.7}'$
100	0.00067	－0.0051	－0.011	0.0036	－0.015	－0.012	－0.0029
70	－0.000093	－0.0031	－0.0086	－0.0089	－0.00056	－0.016	－0.0030

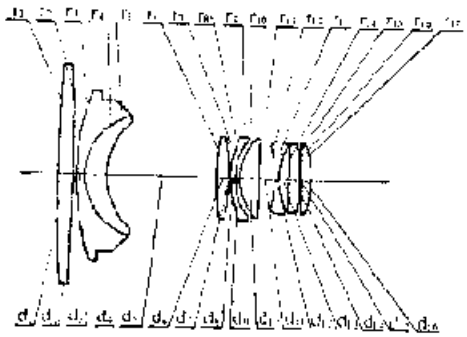




编号：02-00-057

摄影或电影摄影用的广角物镜

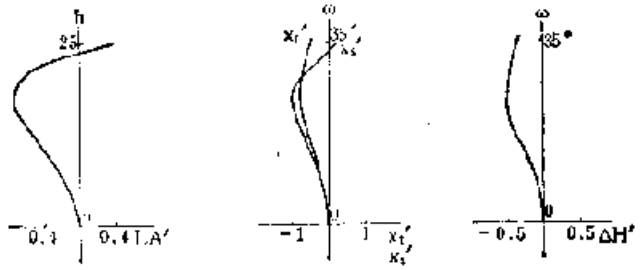
E.F.L＝100　　B.F.L＝126.9　　FNo.＝2　　F.A.＝±35°**

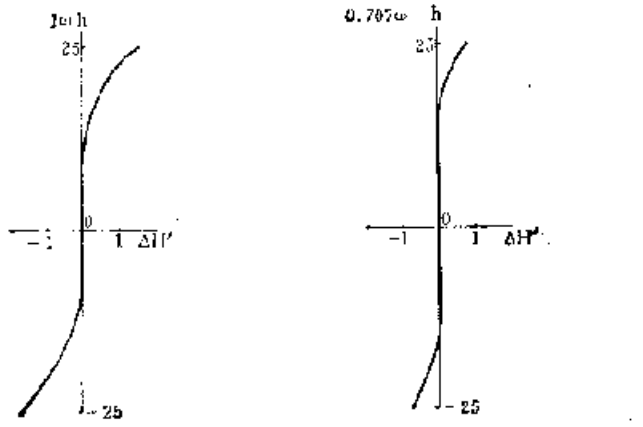


序号	r	d	n_D	V	序号	r	d	n_D	V
1	1451.90	16.43	1.52630	51.00	10	66.49	19.63	1.71700	47.90
2	−1461.00	2.49			11	15706.80	18.00*		
3	263.32	9.03	1.71760	47.90	12	−165.15	5.79	1.78470	26.10
4	67.70	24.93	1.61293	36.95	13	76.77	10.47		
5	78.34	123.04			14	991.49	11.78	1.71300	53.89
6	458.38	12.01	1.69968	34.95	15	−239.62	0.59		
7	−297.45	0.33			16	875.30	9.21	1.71300	53.89
8	104.55	6.02	1.62364	36.75	17	−102.45			
9	58.55	5.22							

18.00* = 9.00 − 9.00

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.29	0.064	−0.018	−0.31	−0.66	68.52	0.50%
h或ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.36	0.34	0.53	0.21	0.74	−0.11	−0.12
70	−0.72	−0.50	−0.85	−0.93	0.082	−0.025	−0.035

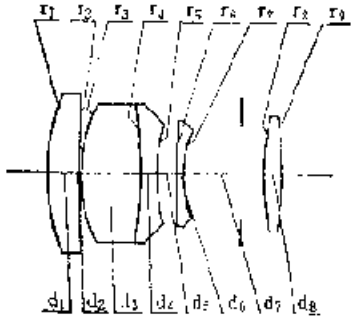




编号：02-00-058

摄影或电影摄影用的大孔径物镜

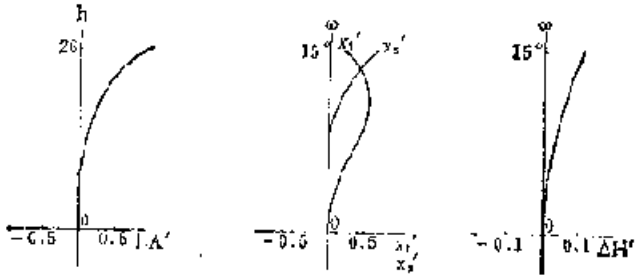
E.F.L＝100　　B.F.L＝44.69　　FNo.＝1.9　　F.A.＝±15°

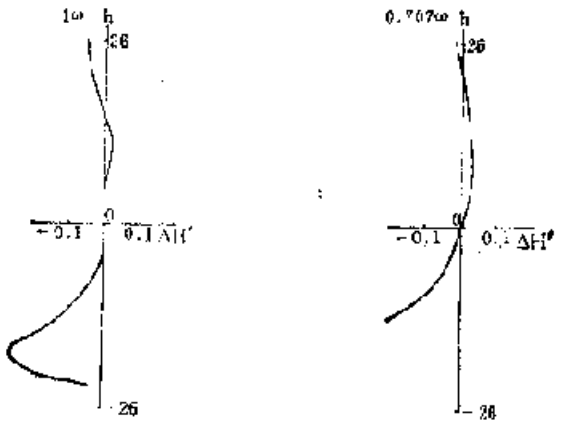


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	59.04	8.91	1.7279	37.76	6	∞	1.67	1.747	27.50
2	1513.25	0.21			7	30.08	22.28*		
3	45.93	16.71	1.6255	57.87	8	83.62	5.57	1.7748	36.35
4	−111.41	4.46	1.7471	27.50	9	−89.11			
5	54.60	5.57							

22.28* = 12.28 + 10.00

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	IH	QP(1ω)
	0.015	−0.077	0.12	−0.11	0.18	26.60	0.41%
h 或ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{10.7}'$
100	1.30	0.21	0.46	0.38	−0.59	1.72	−0.13
70	0.24	0.075	0.59	0.13	0.46	−0.99	−0.23

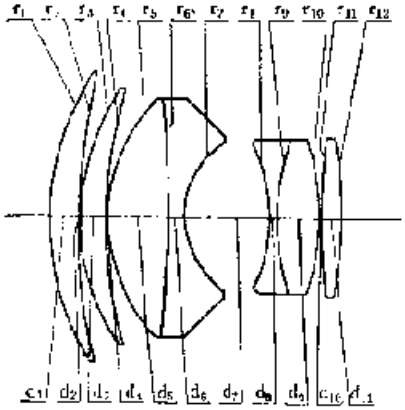




编号：02-00-059

大 孔 径 高 斯 型 物 镜

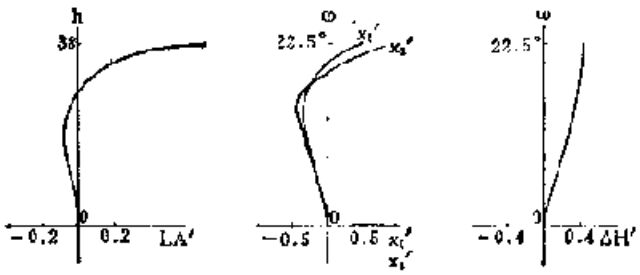
E.F.L=102　　B.F.L=46.03　　FNo.=1.3　　F.A.=±22.5°

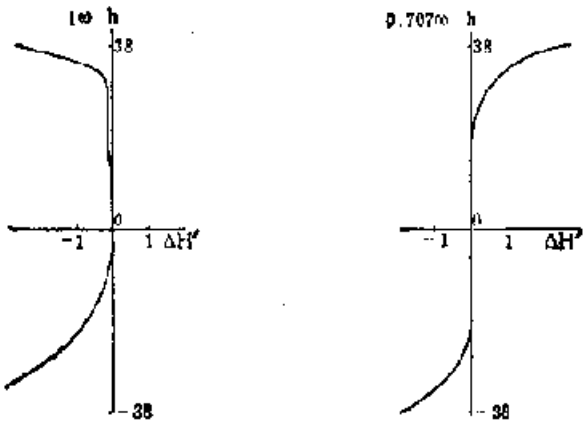


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	83.496	8.75	1.6780	55.5	7	26.951	20.19*		
2	202.980	0.10			8	−44.198	2.35	1.54072	47.2
3	70.207	7.53	1.6910	54.8	9	81.438	12.74	1.7170	47.9
4	132.340	0.60			10	−74.430	0.10		
5	49.059	18.98	1.6392	44.9	11	263.439	6.86	1.7340	51.1
6	319.460	4.70	1.72825	28.3	12	−97.021			

20.19* = 8.00 + 12.19

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	OP(100)
	−0.15	0.064	−0.037	−0.46	0.35	42.09	1.02%
J.数(ω%)	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{D.7}'$
100	0.69	0.43	0.50	0.73	−0.23	−4.95	−0.88
70	−0.037	−0.35	−0.36	−0.41	0.05	0.25	−0.021

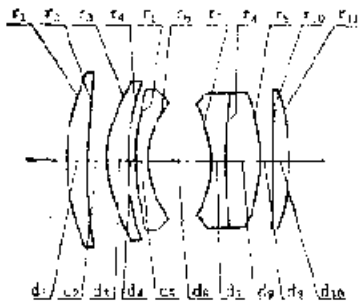




编号：02-00-060

摄　影　物　镜

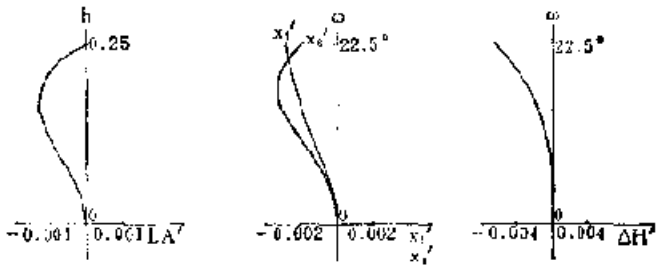
E.F.L＝1　　B.F.L＝0.745　　FNo.＝2　　F.A.＝±22.5°*

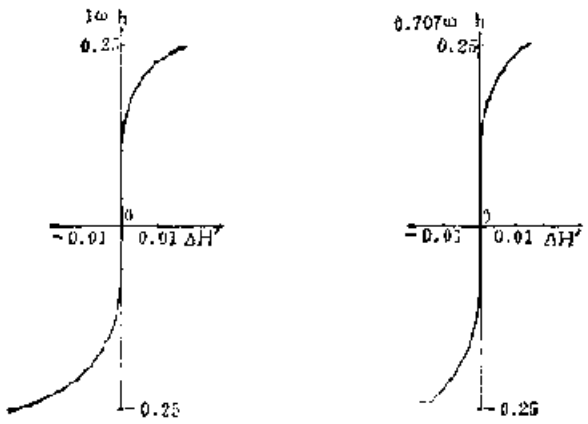


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	0.8164	0.057	1.72341	50.1	7	−0.3203	0.036	1.67764	32.0
2	1.7313	0.051			8	1.5025	0.103	1.69400	54.6
3	0.4079	0.068	1.69400	54.6	9	0.5003	0.035		
4	0.7224	0.020			10	∞	0.056	1.82450	43.2
5	0.7245	0.036	1.84416	34.4	11	−0.6521			
6	0.2630	0.100*							

0.190* = 0.100 + 0.090

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	OP(1ω)
	−0.00074	0.000000026	0.00025	−0.0016	−0.0023	0.41	−1.84%
h 或 ω%	LA′	ΔH′	x_t^*	x_s^*	$x_t^* - x_s^*$	K_T^*	$K_{T0.7}^*$
100	0.00010	−0.0067	−0.0029	−0.0021	−0.00078	−0.0067	−0.0032
70	−0.0014	−0.0020	−0.0024	−0.0036	0.0012	−0.0011	−0.00061

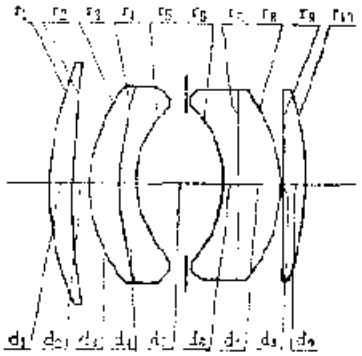




编号：02-00-061

大 孔 径 高 斯 型 物 镜

E.F.L＝1　　B.F.L－0.757　　FNo.＝1.6　　F.A.＝±22.5°**

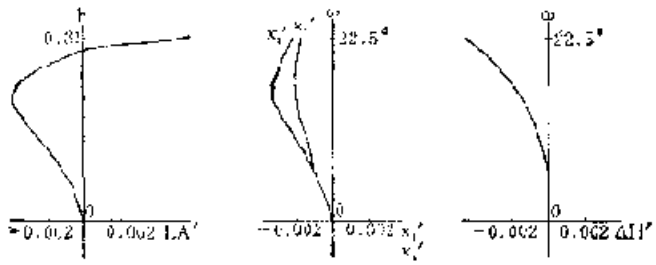


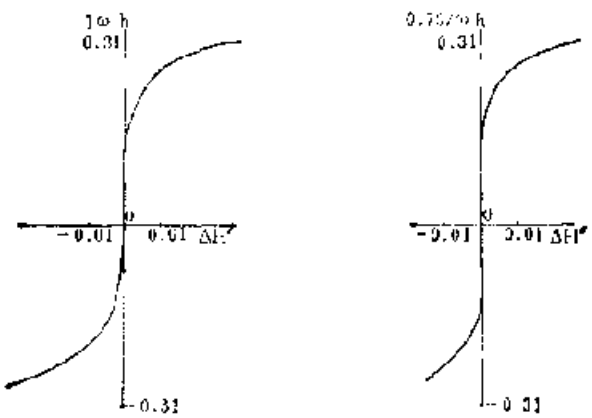
部件	r	d	np	ν	序号	r	d	np	ν
1	0.7874	0.0610	1.74811	50.15	6	－0.3036	0.0419	1.66680	33.09
2	1.8038	0.0419			7	∞	0.1150	1.71300	53.89
3	0.4195	0.0856	1.69100	54.80	8	－0.4185	0.001		
4	0.8206	0.0491	1.62588	35.64	9	12.5545	0.0638	1.75350	51.04
5	0.2844	0.2359*			10	－0.7809			

0.2359* = 0.1359 + 0.1000

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	$Q_H'(1\omega)$
	－0.0033	－0.000076	－0.00312	－0.0025	－0.0021	0.41	－1.17%

视场ω%	LA'	ΔH'	x_t'	x_s'	$x_t'-x_s'$	K_{T_1}'	$K_{T_{0.7}}'$
100	0.0061	－0.0048	－0.0018	－0.0023	0.00051		－0.0053
70	0.0041	0.0015	－0.0021	－0.0036	0.0015	－0.021	－0.0019

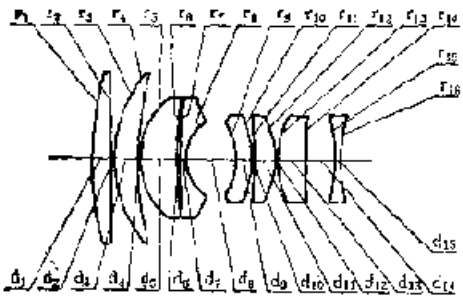




编号：02-00-062

红　外　物　镜

E.F.L＝1　　B.F.L＝0.054　　FNo.＝1　　F.A.＝±4.58°**

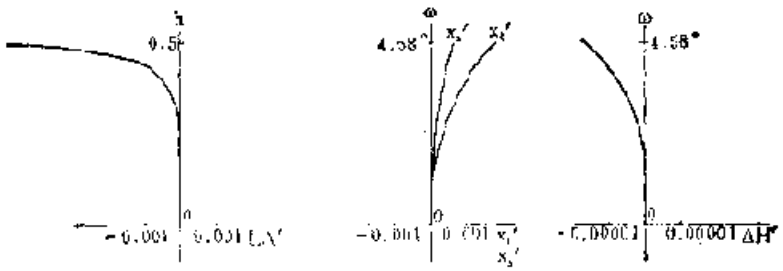


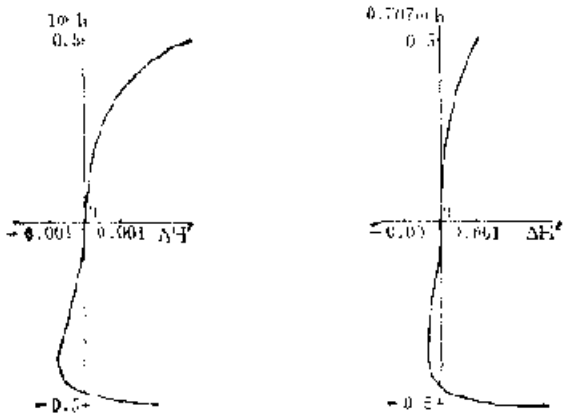
序号	r	d	n880mμ	n995mμ	n1150mμ	序号	r	d	n880mμ	n995mμ	n1550mμ
1	1.800	0.121	1.55982	1.55832	1.55702	9	−0.392	0.099	1.79771	1.79479	1.79242
2	−18.334	0.005				10	−0.641	0.016			
3	0.796	0.150	1.61118	1.60955	1.60817	11	−3.996	0.125	1.55982	1.55832	1.55702
4	1.820	0.005				12	−0.500	0.003			
5	0.456	0.227	1.61113	1.60955	1.60817	13	0.612	0.175	1.67966	1.67768	1.67597
6	2.503	0.061				14	∞	0.166			
7	2.803	0.057	1.79771	1.79479	1.79242	15	−0.925	0.039	1.52760	1.52621	1.52501
8	0.277	0.292*				16	1.157				

0.292* = 0.150 + 0.142

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QΓ(1ω)
	0.00018	0.000043	0.00029	0.000056	0.000016	0.08	−0.02%

h或ω%	LA′	ΔH′	x_t'	x_s'	x_t'' x_s''	K_{T1}''	$K_{T0.7}''$
100	−0.0017	−0.000018	0.0017	0.00053	0.0012	0.0030	0.00019
70	−0.00015	−0.000005	0.00085	0.00025	0.00050	0.0021	0.00010

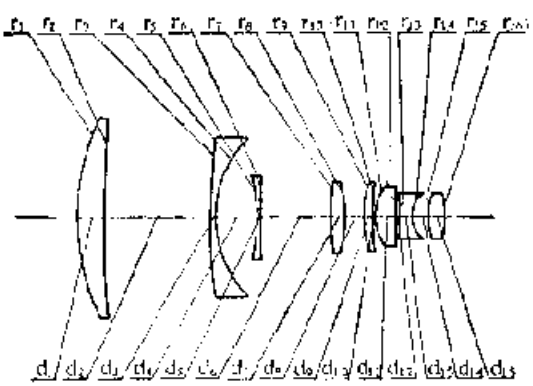




编号：02-00-063

大 孔 径 物 镜

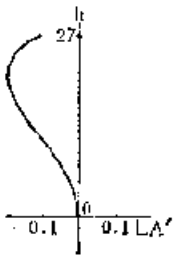
E.F.L＝100　　B.F.L＝37.2　　FNo.＝1.8　　F.A.＝⊥9°**

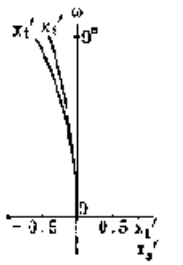


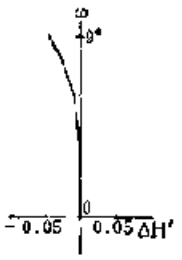
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	291.94	31.25	1.71615	53.7	9	91.01	11.69	1.68081	55.3
2	1621.07	131.58			10	250.05	0.50		
3	924.46	6.25	1.64648	47.5	11	57.13	28.75	1.69400	54.6
4	136.48	50.20			12	∞	0.81		
5	−173.49	6.25	1.62410	36.1	13	−424.87	16.38	1.76846	26.8
6	∞	87.01			14	32.07	20.13*		
7	587.81	12.50	1.52010	65.0	15	59.04	18.07	1.67341	46.9
8	−225.62	25.00			16	−168.78			

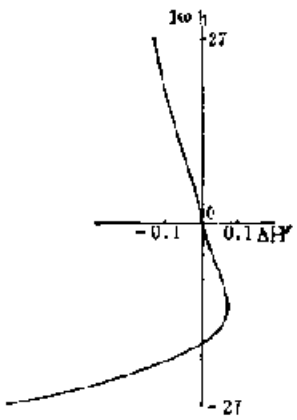
20.13* = 10.13 + 10

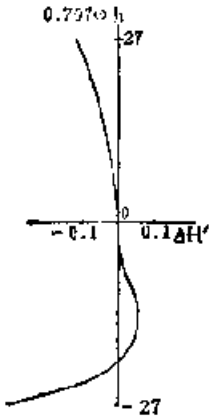
	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.087	0.027	−0.010	−0.064	−0.0023	16.13	−0.29%
h 或 ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{H1}'	$K_{H0.7}'$
100	−0.11	−0.047	−0.58	−0.44	−0.14	−0.49	−0.054
70	−0.19	−0.010	−0.29	−0.23	−0.06	−0.21	−0.012







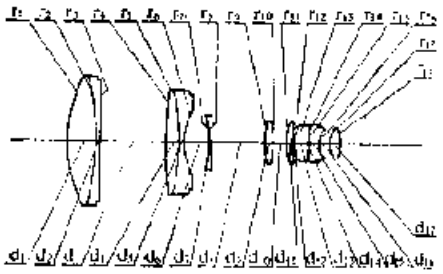




编号：02-00-064

大 孔 径 物 镜

E.F.L＝100　　B.F.L＝37.2　　FNo.＝1.8　　F.A.＝±9°

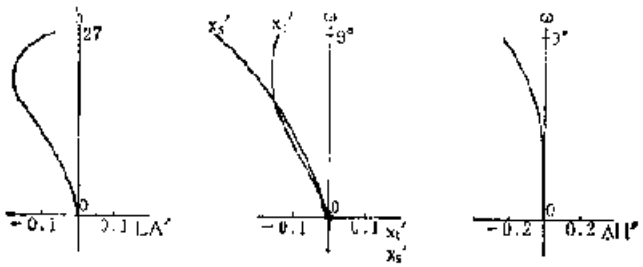


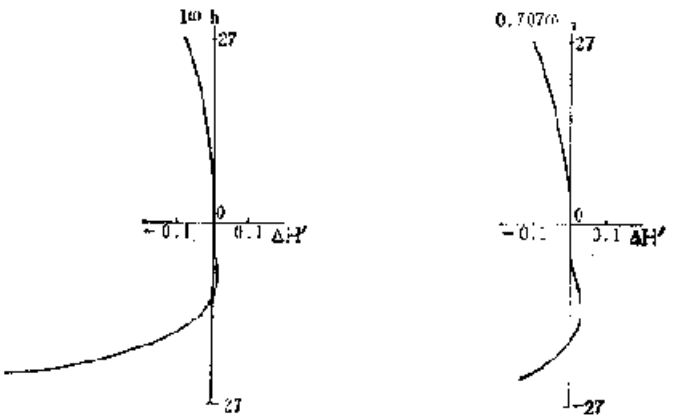
序号	r	d	n_D	ν_D	序号	r	d	n_D	ν_D
1	270.37	50.01	1.6207	49.5	10	−225.62	25.00		
2	−438.45	9.38	1.76846	26.8	11	91.01	11.69	1.68081	55.3
3	15883.63	122.08			12	250.04	0.50		
4	944.50	21.88	1.76846	26.8	13	57.13	28.75	1.69400	54.6
5	−375.06	6.25	1.62287	60.1	14	∞	0.81		
6	111.99	49.88			15	−124.87	16.38	1.76846	26.8
7	−172.49	6.25	1.62410	36.1	16	32.67	20.13*		
8	∞	90.89			17	59.04	18.07	1.67341	46.9
9	587.81	12.50	1.52013	65.0	18	−168.78			

20.13* = 10.13 + 10.00

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(100)
	−0.081	0.014	−0.0047	−0.059	−0.058	16.14	−1.47%

h 或 ω	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{10.7}'$
100	−0.073	−0.23	−0.15	−0.31	0.16	−0.81	−0.12
70	−0.17	−0.068	−0.17	−0.19	0.016	−0.28	−0.036

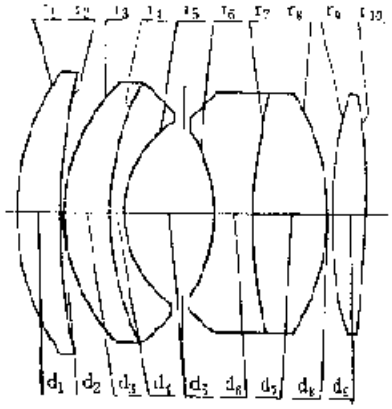




编号：02-00-065

大 孔 径 高 斯 型 物 镜

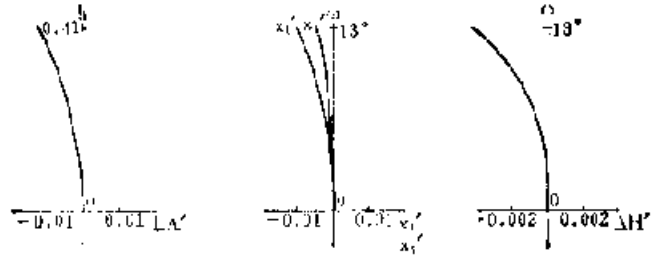
E.F.L＝1　　B.F.L＝0.655　　FNo.－1.2　　F.A.＝±13°

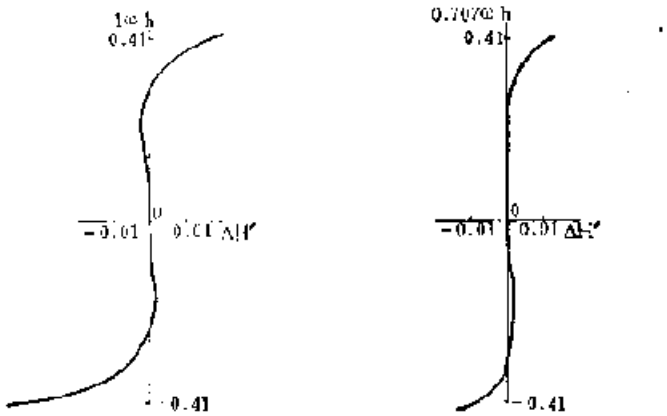


序号	r	d	n	ν	序号	r	d	n	ν
1	0.687	0.126	1.758	30.5	6	－0.419	0.110	1.741	28.1
2	1.895	0.0007			7	1.431	0.213	1.734	51.0
3	0.510	0.28	1.807	40.6	8	－0.537	0.004		
4	0.760	0.013	1.699	30.1	9	1.102	0.103	1.788	47.4
5	0.300	0.256*			10	－2.143			

0.256* = 0.167 + 0.089

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	－0.0041	0.000069	－0.00051	－0.0012	－0.0030	0.23	－1.83%
h 或 ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T_1}'	$K_{T_{0.7}}'$
10C	－0.012	－0.0042	－0.0094	－0.0044	－0.0050	－0.014	－0.0018
7C	－0.0055	－0.0014	－0.0044	－0.0024	－0.0030	－0.00095	－0.00020

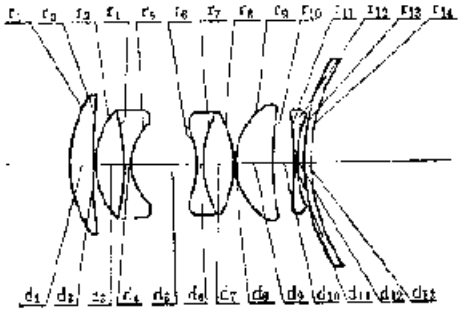




编号：02-00-066

电 视 摄 影 物 镜

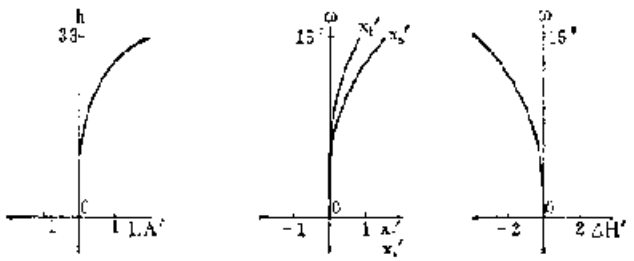
E.F.L＝102　　B.F.L＝1.52　　FNo.＝1.5　　F.A.＝±15°

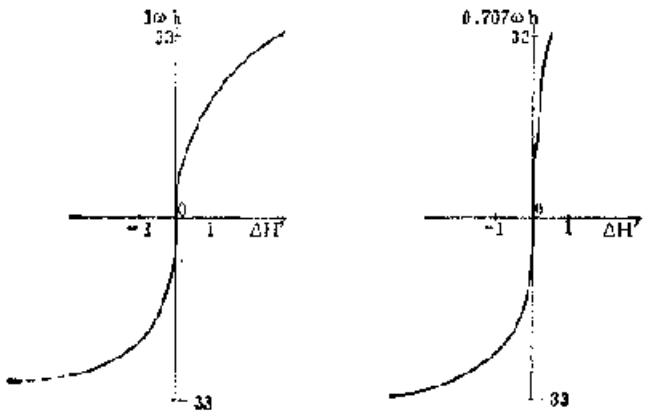


序号	r	d	n	ν	序号	r	d	n	ν
1	73.0	14.00	1.694	54.6	8	− 58.9	0.30		
2	170.0	0.30			9	41.1	23.80	1.673	47.0
3	44.4	17.90	1.694	54.6	10	132.3	12.55		
4	− 170.0	4.80	1.813	25.3	11	− 239.0	1.8	1.813	25.3
5	30.8	39.50*			12	68.8	3.6		
6	− 59.6	7.30	1.678	32.0	13	111.5	5.4	1.512	63.1
7	66.6	18.20	1.694	54.6	14	106.3			

39.50* − 20.00 + 19.50

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	I=I	QH'(1ω)
	0.059	− 0.096	− 0.021	0.17	− 1.77	27.24	− 14.70%
h 或 ω%	LA'	ΔH'	x_t^*	x_s^*	$x_t^* - x_s^*$	h_T^*	$K_{(1\omega)}^*$
100	1.94	− 4.00	0.75	1.40	− 0.65	− 3.34	− 0.052
70	0.45	− 1.21	0.28	0.54	− 0.26	− 1.88	− 0.30

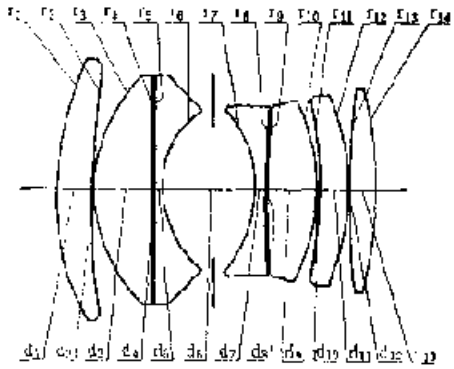




编号：02-00-067

摄　影　物　镜

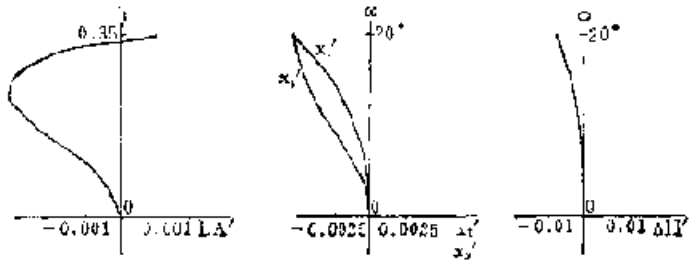
E.F.L＝1　　B.F.L＝0.66　　FNo.＝1.4　　F.A.＝±20°

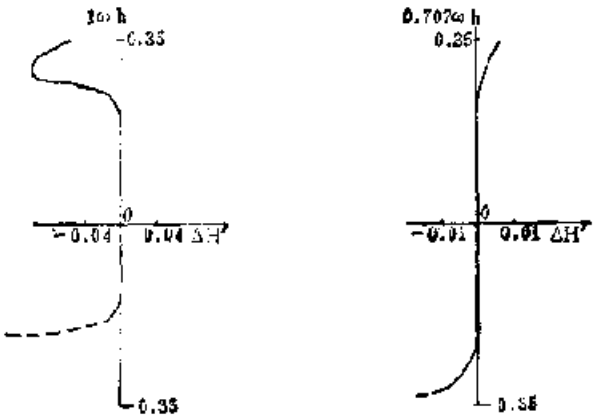


序号	r	d	np	νd	序号	r	d	nD	νd
1	0.8466	0.1148	1.71700	47.90	8	3.7272	0.0030		
2	3.7166	0.0017			9	3.7272	0.1436	1.78443	43.77
3	0.4830	0.1774	1.62299	58.12	10	−0.6135	0.0017		
4	∞	0.0000			11	−1.6178	0.0345	1.78443	43.77
5	∞	0.0253	1.57501	41.31	12	−0.7766	0.0017		
6	0.3004	0.2872*			13	2.3300	0.0345	1.71700	47.90
7	−0.3622	0.0372	1.80518	25.46	14	−1.1371			

0.2872*＝0.1872＋0.1000

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.0030	0.00090	0.00067	−0.0034	−0.0042	0.96	−1.92%
h 或 ω%	LA′	AII′	x_T'	x_S'	$x_T'-x_S'$	K_{T1}'	$K_{IC.7}'$
100	0.0010	−0.0070	0.0032	−0.0052	0.000037		
70	−0.0032	−0.0024	−0.0021	−0.0042	0.0021		−0.00040

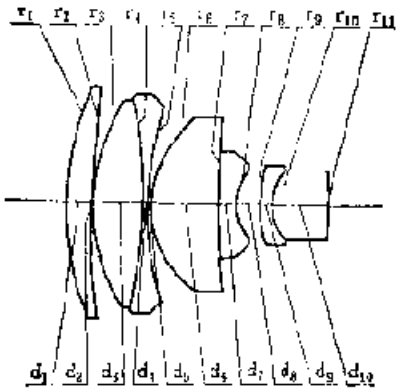




编号：02-00-068

大 孔 径 摄 影 物 镜

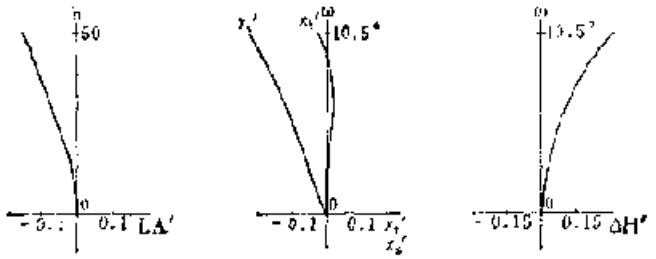
E.F.L＝100　　B.F.L＝6.89　　FNo.＝1　　F.A.＝±10.5°

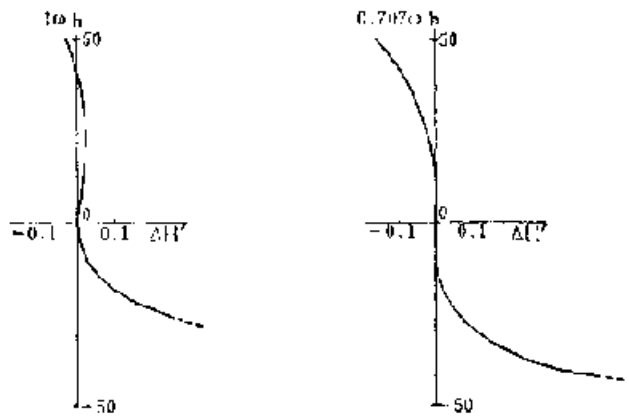


序号	r	d	n	v	序号	r	d	n	v
1	1a2.6	5.4	1.699	30.0	7	957.4	9.5	1.795	28.4
2	337.2	0.2			8	23.9	12.4*		
3	108.1	27.8	1.694	53.4	9	65.0	6.4	1.603	60.7
4	−259.1	5.4	1.728	28.7	10	20.7	31.4	1.788	50.5
5	179.2	0.8			11	−338.3			
6	56.1	37.5	1.691	54.8					

12.4* = 8.0 + 4.4

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QF(1○)
	−0.13	−0.060	0.10	−0.28	0.50	18.17	1.66%
h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{f_1}'	$K_{10.7}'$
100	0.15	0.30	0.026	0.22	0.194	3.05	0.41
70	−0.13	0.15	0.015	−0.15	0.165	0.44	0.027

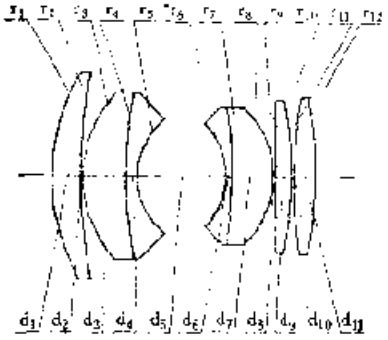




编号：02-00-069

改 进 的 高 斯 型 物 镜

E.F.L＝1　　B.F.L＝0.575　　FNo.＝1.4　　F.A.＝±22.5°**

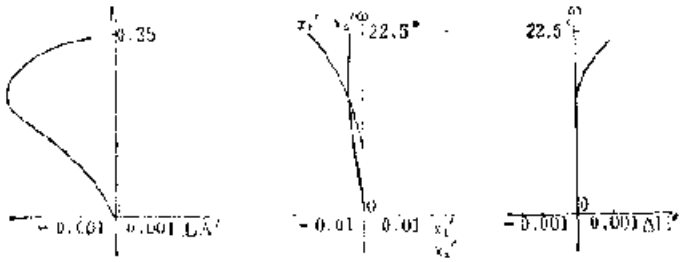


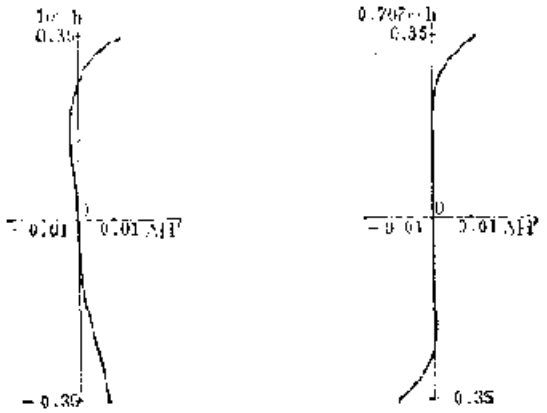
面号	r	d	n_d	v	面号	r	d	n_d	v
1	0.7261	0.1141	1.65100	56.60	7	− 2.5000	0.1550	1.69680	55.61
2	2.2321	0.0020			8	− 0.3691	0.0020		
3	0.4591	0.1651	1.69680	55.61	9	20.0000	0.0650	1.69350	53.51
4	2.5000	0.0340	1.60545	38.03	10	− 1.5104	0.0020		
5	0.2733	0.3316*			11	2.2805	0.0750	1.69350	53.51
6	− 0.2785	0.0220	1.70035	30.28	12	− 1.6935		1	

0.3316* = 0.1700 + 0.1616

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	CP(1ω)
	− 0.0028	0.00013	0.00041	0.0031	0.000046	0.41	0.29%

比视场(ω%)	LA′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K'_{T1}	$K'_{T0.7}$
100	− 0.00074	0.0012	− 0.015	− 0.00407	− 0.011	0.010	0.0026
71	− 0.0031	0.000060	− 0.0049	− 0.00405	0.00085	0.0011	0.00072

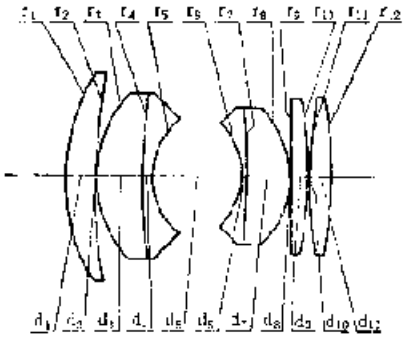




编号：02-00-070

改 进 的 高 斯 型 物 镜

E.F.L＝1　　B.F.L＝0.562　　FNo.＝1.4　　F.A.＝±22.5°**

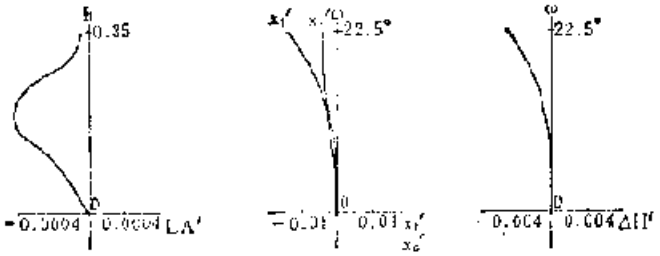


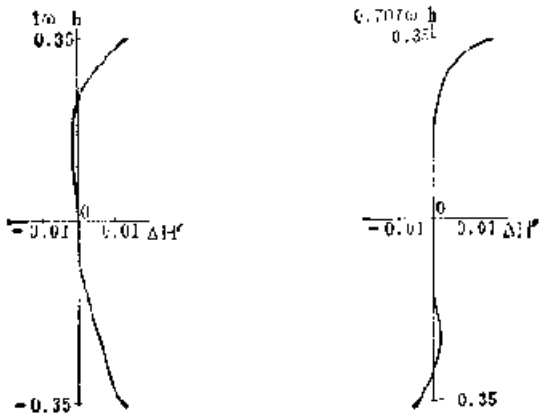
序号	r	d	n_d	ν	序号	r	d	n_g	ν
1	0.7854	0.1330	1.65072	58.65	7	−6.2246	0.1454	1.69109	54.66
2	2.2884	0.0020			8	−0.3658	0.0341		
3	0.4508	0.1654	1.69109	54.66	9	7.4289	0.0661	1.69109	54.66
4	3.2679	0.0341	1.60936	39.70	10	−2.0712	0.0020		
5	0.2692	0.3362*			11	1.6893	0.0855	1.69109	54.66
6	−0.2813	0.0322	1.70059	30.27	12	−2.0400			

0.3362* = 0.1700 + 0.1662

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.0012	0.00043	0.00037	−0.0033	−0.0030	0.41	−1.15%

h 或 ω %	LA′	ΔH′	x_t'	x_c'	$x_t'-x_c'$	K_{T1}'	K_{C-T}'
100	−0.00074	−0.0047	−0.014	−0.0054	−0.009	0.013	0.0037
70	−0.00074	0.0017	−0.0049	−0.0045	−0.00039	0.0058	0.0017

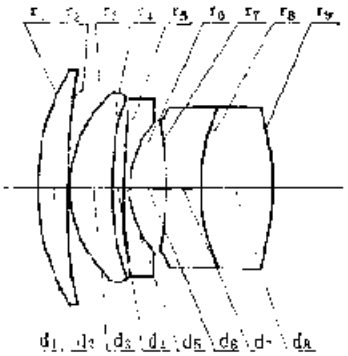




编号：02-00-071

四组元大孔径摄影和电影摄影物镜

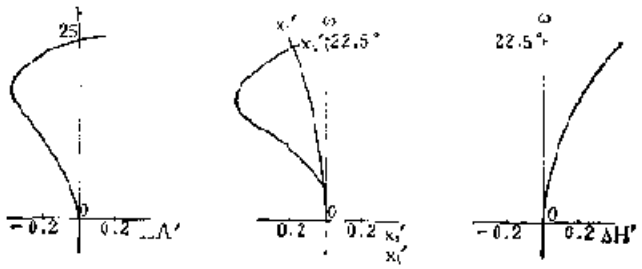
E.F.L＝100　　B.F.L＝55.04　　FNo.＝2　　F.A.＝±22.5°

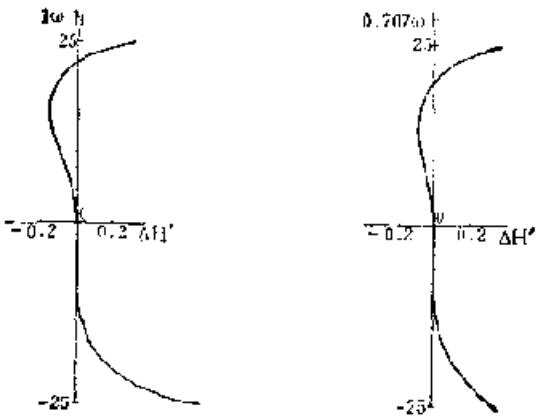


序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	66.83	8.6	1.69100	54.8	6	23.85	9.6*		
2	200.03	0.2			7	−535.40	10.0	1.50048	66.0
3	35.99	12.0	1.69100	54.8	8	47.86	20.0	1.71300	53.9
4	87.16	3.0			9	−100.00			
5	105.90	2.0	1.72830	28.7					

9.6*　5.0＋4.6

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HT	QP(1ω)
	−0.15	−0.057	0.061	−0.26	0.21	41.12	1.07%
h（对ω%）	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T_0}'	$K_{T_{0.7}}'$
100	0.12	0.44	0.23	0.17	0.058	0.50	0.030
70	−0.37	0.21	−0.13	−0.54	0.41	0.35	0.0025



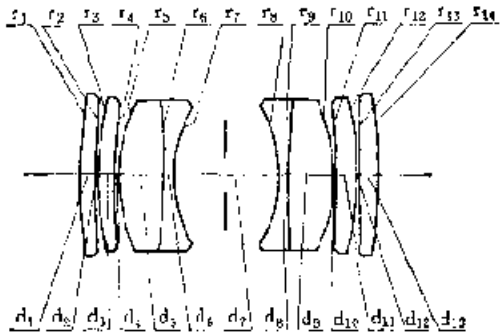


编号：02-00-072

八 片 式 高 斯 物 镜

E.F.L＝100　　B.F.L＝48.40　　FNo.＝2.5　　F.A.＝＋10°**

l＝－∞

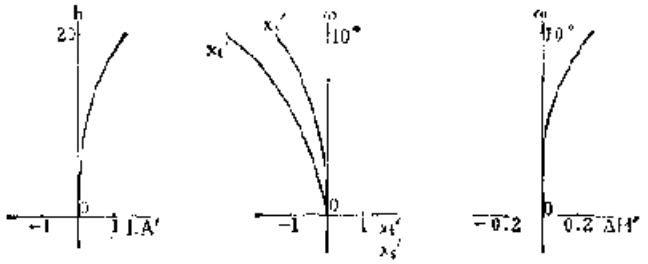


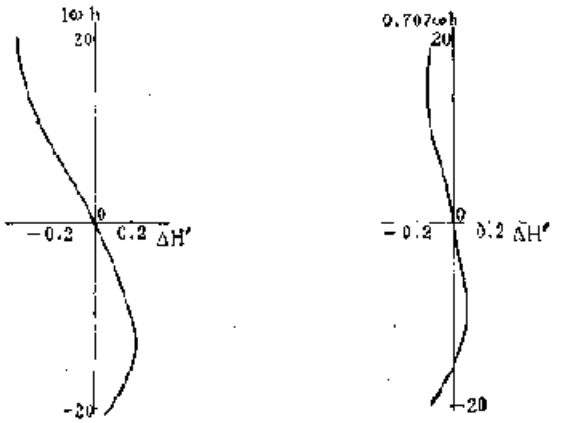
序号	r	d	n	ν	序号	r	d	n	ν
1	155.0	4.65	1.694	53.8	8	－35.6	2.25	1.704	34.7
2	6220.0	0.15			9	279.5	12.60	1.625	52.9
3	92.4	5.60	1.694	54.5	10	－46.7	0.15		
4	339.0	0.15			11	－339.0	5.60	1.694	54.5
5	46.7	12.60	1.625	52.9	12	－92.4	0.15		
6	－279.5	2.25	1.704	34.7	13	－6220.0	4.65	1.694	54.5
7	35.6	29.85*			14	－155.0			

29.85* = 14.93 + 14.93

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QP(1ω)
	0.082	0.321	0.015	－0.060	0.10	17.19	1.63%

h 或 ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{T0.7}'$
100	1.26	0.28	－2.73	－1.37	－1.36	－0.17	－0.076
70	0.57	0.094	－1.30	－0.68	－0.62	－0.12	－0.057

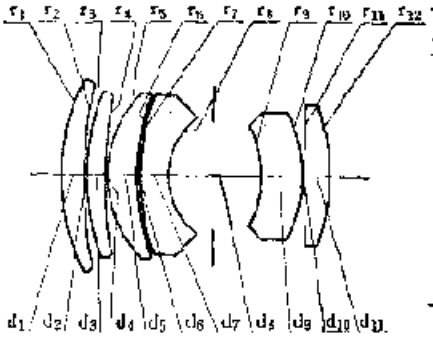




编号：02-00-073

改进的高斯型摄影物镜

E.F.L＝1　　B.F.L＝0.4473　　FNo.＝2　　F.A.＝±14°

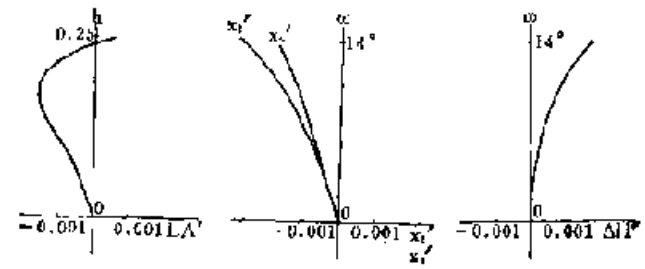


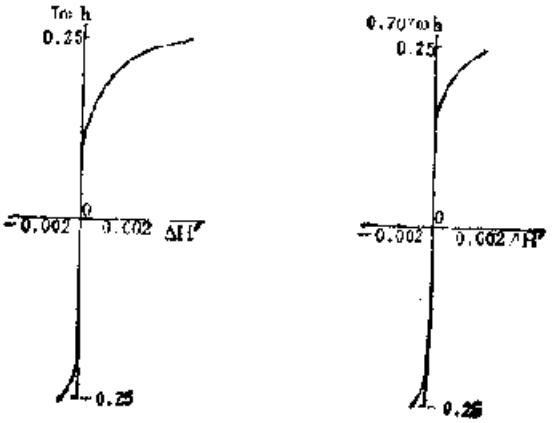
序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	0.61825	0.05712	1.62287	60.06	7	0.62712	0.07734	1.70444	29.84
2	1.22168	0.00119			8	0.19409	0.25225*		
3	0.62269	0.03355	1.62287	60.06	9	−0.27813	0.10659	1.81262	25.28
4	1.12335	0.00119			10	−0.41918	0.00059		
5	0.30538	0.09043	1.62287	60.06	11	2.94622	0.06188	1.62287	60.06
6	0.66455	0.00119			12	−0.52012			

$0.25226^* = 0.08000 + 0.17226$

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	−0.00077	−0.00012	0.0000063	−0.00041	0.0010	0.24	0.72%

h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K_T'	$K_{T0.7}'$
100	0.00040	0.0017	−0.0029	0.0019	0.0010	0.0025	0.00045
70	−0.0016	0.00070	−0.0015	−0.0013	−0.00018	0.00093	0.00011

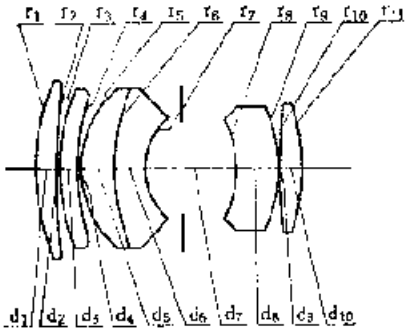




编号：02-00-074

改进的高斯型摄影物镜

E.F.L=1　　B.F.L=0.4448　　FNo.=2　　F.A.=±14°

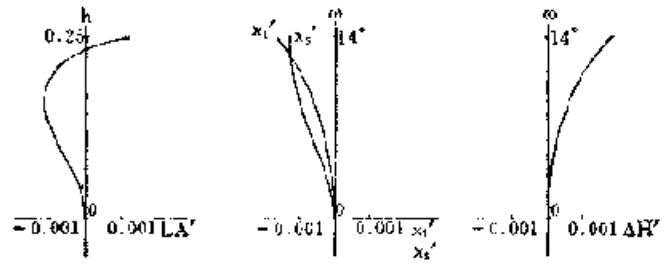


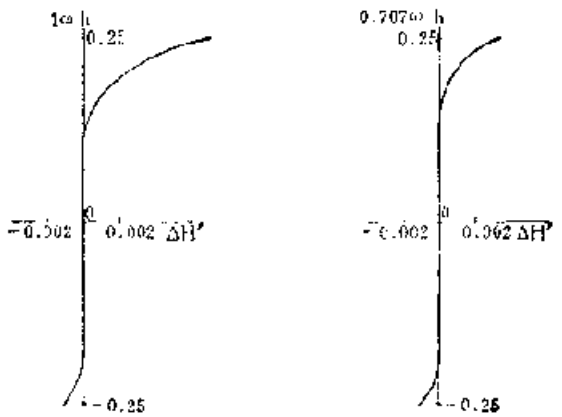
序号	r	d	n_e	ν	序号	r	d	n_e	ν
1	0.63752	0.05682	1.62287	60.06	7	0.19447	0.25272*		
2	2.10488	0.00118			8	−0.29019	0.11009	1.81262	25.28
3	0.66388	0.05327	1.62287	60.06	9	−0.44156	0.00059		
4	0.87196	0.00118			10	2.39019	0.05082	1.62287	60.06
5	0.29347	0.09933	1.62287	60.06	11	−0.54814			
6	0.63752	0.07812	1.70474	29.84					

0.25272* = 0.08000 + 0.17272

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	OP(1ω)
	−0.00060	−0.00012	0.000074	−0.00012	0.0010	0.24	0.72%

h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.0011	0.0017	−0.0016	−0.0018	−0.00023	0.0029	0.00055
70	−0.0011	0.00071	−0.00077	−0.0010	0.00033	0.0011	0.00015

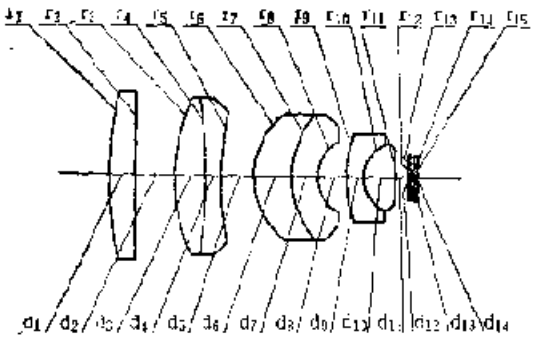




编号：02-00-075

四 组 元 大 孔 径 物 镜

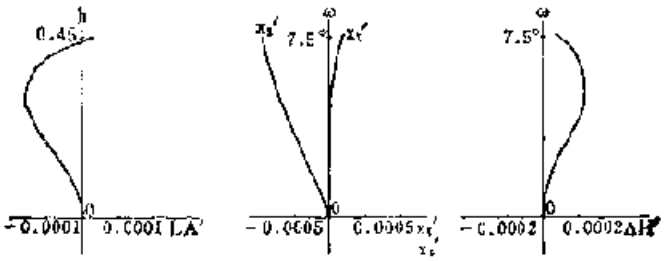
E.F.L＝1　　B.F.L＝0　　FNo.＝1.1　　F.A.＝±7.5°

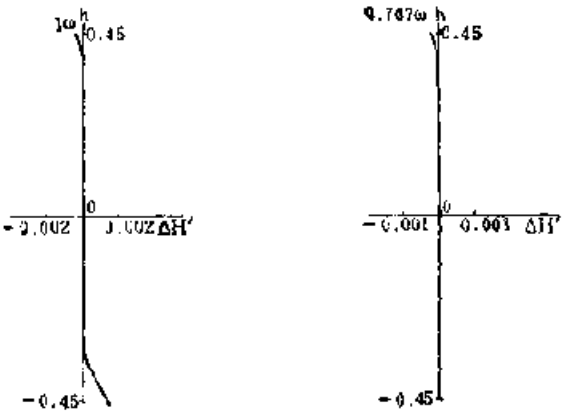


序号	r	d	n	v	序号	r	d	n	v
1	2.0800	0.14200	1.721	47.7	9	0.6210	0.08200	1.692	52.9
2	23.6000	0.21000			10	0.2035	0.17000	1.792	50.2
3	0.9876	0.18200	1.721	47.7	11	11.32	0.07580		
4	−2.0330	0.07800	1.813	25.3	12	∞	0.02800	1.516	64.1
5	1.7710	0.17800			13	∞	0.00556		
6	0.4380	0.09400	1.694	54.6	14	∞	0.01500	1.516	64.1
7	0.5410	0.14200	1.768	26.8	15	∞			
8	0.2200	0.15000*							

0.15000* = 0.07500 + 0.07500

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HT	QP (1ω)
	−0.00025	−0.000043	0.00031	−0.0010	0.0010	0.13	0.048%
h 或ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{T3.7}'$
100	0.000015	0.000063	0.00016	−0.00095	0.0011	0.00069	−0.000050
70	−0.00016	0.00024	0.00069	−0.00071	0.00078	−0.000013	−0.000045

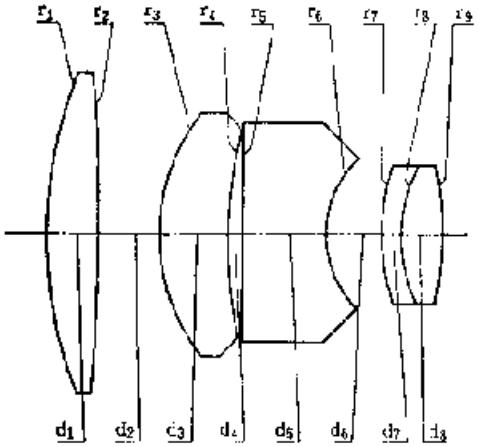




编号：02-00-076

摄　影　物　镜

E.F.L＝100　　**B.F.L＝35.54**　　**FNo.＝1.3**　　**F.A.＝±7.5°****

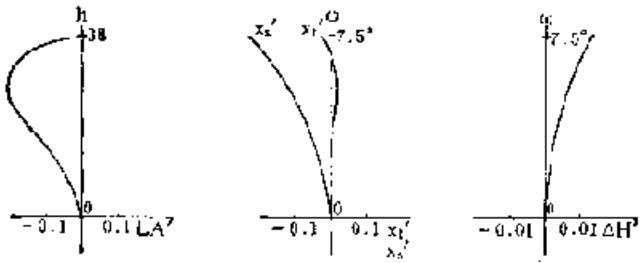


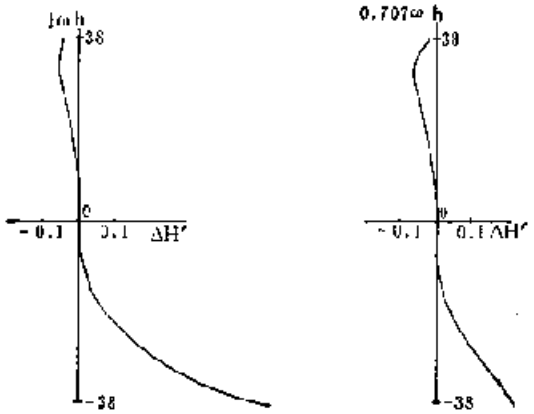
序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	134.34	12.91	1.5229	60.1	6	31.33	15.30*		
2	−756.07	16.74			7	94.55	4.78	1.5198	51.9
3	80.45	20.80	1.5229	60.1	8	61.06	11.95	1.7919	47.2
4	141.80	3.11			9	−92.30			
5	∞	23.91	1.7918	25.9					

15.30* = 7.00 + 8.30

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	OP(1.ω)
	−0.19	0.011	0.044	−0.12	0.019	18.06	0.10%

h 或 ω %	LA′	ΔH′	x_7'	x_6'	$x_7'-x_6'$	K_{T1}'	$K_{T0.7}'$
100	0.0013	0.013	−0.026	−0.23	0.20	0.24	0.077
70	−0.21	0.0072	0.0070	−0.14	0.13	0.097	0.033

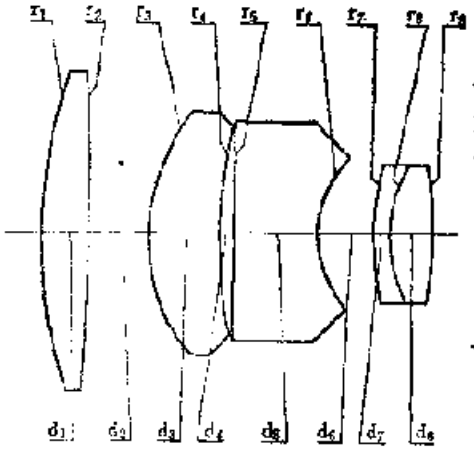




编号：02-00-077

摄　影　物　镜

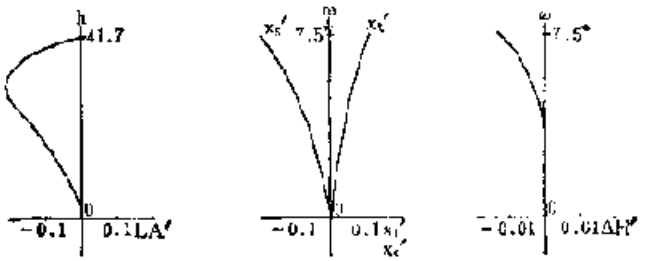
E.F.L＝100　　B.F.L＝35.30　　FNo.＝1.2　　F.A.＝±7.5°**

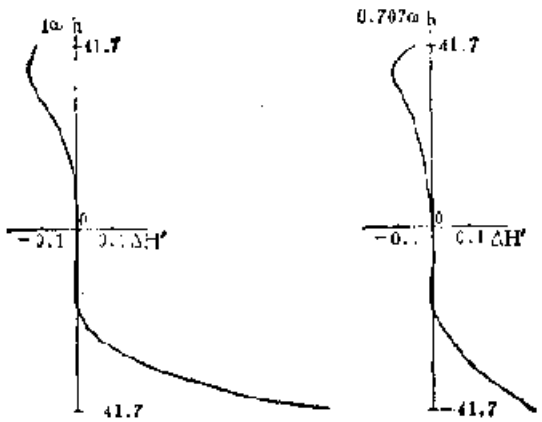


序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	150.70	13.47	1.6998	55.4	6	32.68	15.97*		
2	-1226.05	17.47			7	84.83	4.99	1.5198	51.9
3	53.74	21.71	1.6543	58.3	8	42.89	12.45	1.7919	47.2
4	140.32	3.24			9	-93.01			
5	∞	24.95	1.7918	25.9					

15.97* = 7.00 + 8.97

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	-0.22	0.030	0.069	-0.15	0.0010	13.07	-0.10%
h 或 ω %	LA′	ΔH′	x_t^s	x_s^s	x_t^s x_s^s	$K_{T_0}^s$	$K_{T_{0.7}}^s$
100	0.01	-0.013	0.10	-0.20	0.30	0.29	0.033
70	-0.21	-0.0019	0.066	-0.11	0.17	0.11	0.0021

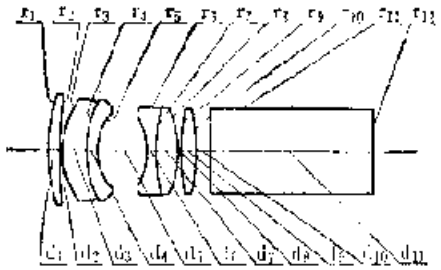




编号：02-00-078

用 于 彩 色 摄 影 的 附 加 物 镜

E.F.L＝100　　B.F.L＝13.91　　FNo.＝1.8　　F.A.＝±10°

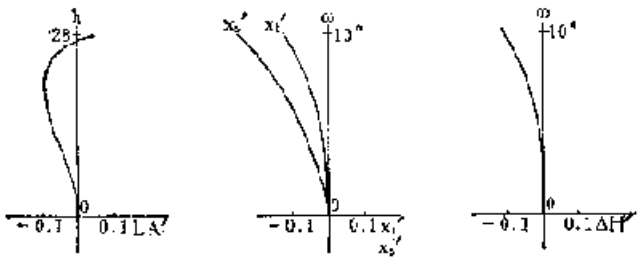


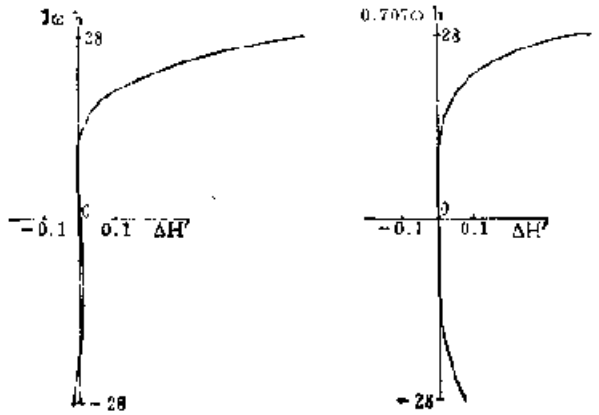
序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	94.10	7.10	1.780	37.6	7	180.80	12.15	1.716	53.7
2	323.00	0.30			8	−49.30	0.30		
3	49.30	12.15	1.694	54.5	9	225.20	8.45	1.732	54.6
4	60.35	5.80	1.652	33.6	10	−102.50	6.90		
5	31.55	27.20*			11	∞	91.20	1.694	54.5
6	−37.45	5.30	1.678	32.0	12	∞			

27.20* = 13.60 + 13.60

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HJ	QP (1ω)
	−0.057	−0.0922	0.013	−0.056	−0.063	17.19	−0.68%

h 或 ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.022	−0.11	−0.12	−0.25	0.13	0.30	0.038
70	−0.10	−0.041	−0.094	−0.132	0.038	0.25	0.037

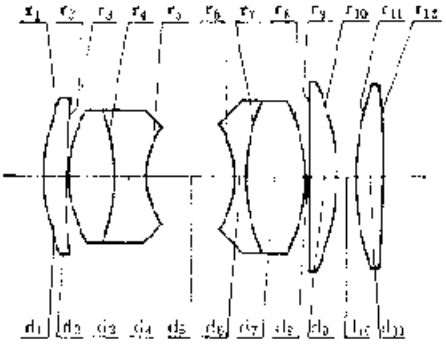




编号，02-00-079

远　焦　点　物　镜

E.F.L＝1　　B.F.L＝0.424　　FNo.＝2　　F.A.＝±12.5°**

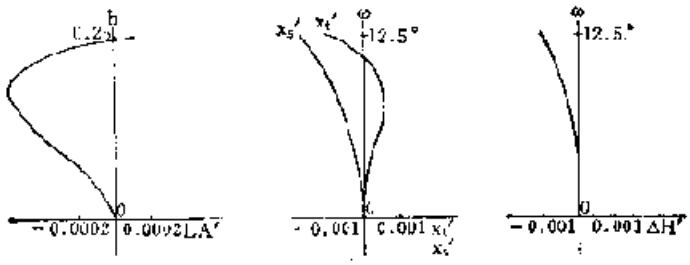


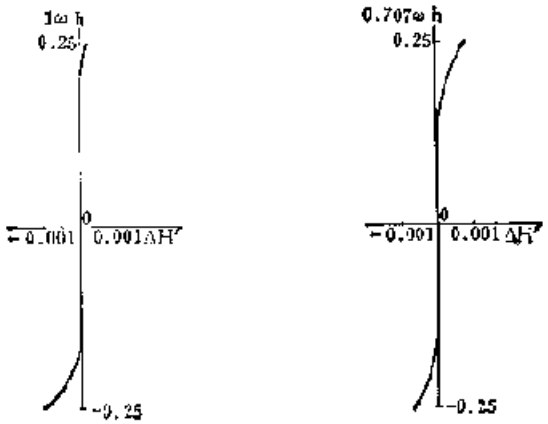
序号	r	d	n_d	ν	序号	r	d	n_d	ν
1	0.6462	0.0867	1.691	54.8	7	0.7178	0.2070	1.651	54.8
2	2.7042	0.0010			8	−0.5335	0.0010		
3	0.4829	0.1510	1.691	54.8	9	−7.1736	0.0900	1.651	56.6
4	−0.8080	0.1068	1.700	41.2	10	−0.7858	0.0690		
5	0.2576	0.3124*			11	0.9960	0.0930	1.651	56.6
6	−0.2992	0.0400	1.648	33.8	12	−3.3146			

$0.3124^{*} = 0.0500 + 0.2624$

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	IH	QP (1 ω)
	−0.00027	0.000013	0.00025	−0.00043	−0.00045	0.21	−0.45%

h 或 ω %	$\Delta A'$	$\Delta H'$	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.00011	−0.0010	−0.0012	−0.0018	0.00070	−0.00047	−0.00014
70	−0.00059	−0.00034	0.00056	−0.0008	0.00136	0.000029	0.000086

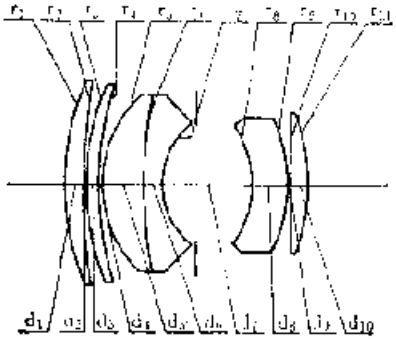




编号：02-00-080

改进的高斯型摄影物镜

E.F.L＝1　　B.F.L＝0.5345　　FNo.＝2　　F.A.＝±14°

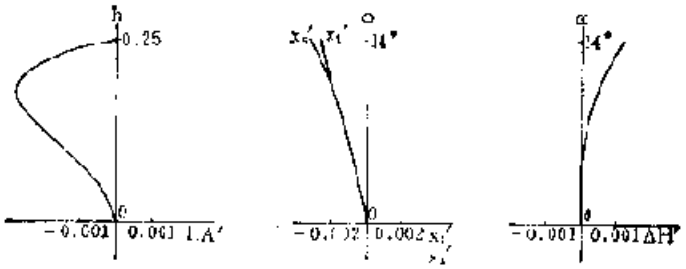


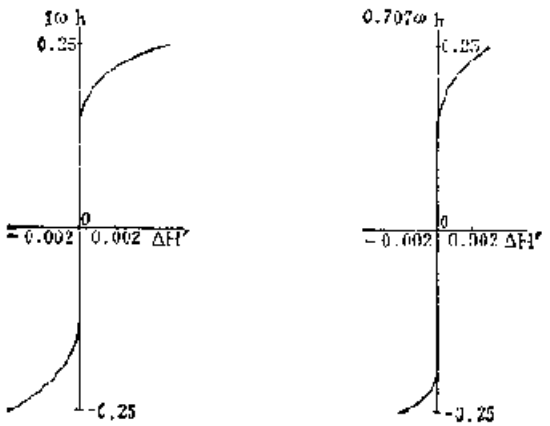
序号	r	d	n_d	ν_d	序号	r	d	n_d	ν_d
1	0.55502	0.08208	1.69300	54.80	7	0.21352	0.23553*		
2	0.95375	0.00059			8	−0.30375	0.08936	1.72825	28.34
3	0.57639	0.04616	1.69100	54.80	9	−0.47801	0.00059		
4	0.80828	0.00059			10	10.70056	0.06155	1.69100	54.80
5	0.34086	0.10770	1.69100	54.80	11	−0.52482			
6	1.90298	0.03847	1.66680	32.00					

0.23553* = 0.10000 + 0.13553

	ΣS_I	ΣS_{II}	ΣS_{III}	ΣS_{IV}	ΣS_V	HI	QP(1ω)
	−0.0012	−0.00011	−0.000015	−0.00003	0.00071	0.21	0.46%

h 或 ω %	$\Delta A'$	$\Delta H'$	x_t'	x_s'	$x_t' - x_s'$	K_{11}'	$K_{70.7}'$
100	0	0.0011	−0.0025	−0.0028	0.00027	0.00067	0.00012
70	0.0026	0.00046	0.0018	−0.0018	0.0000	−0.0000024	−0.000083

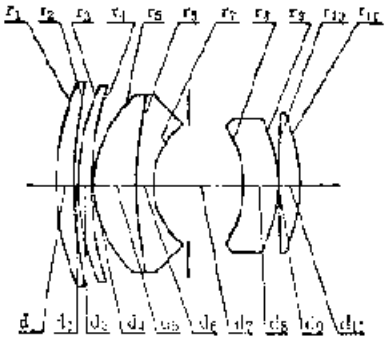




编号：02-00-081

改进的高斯型摄影物镜

E.F.L=1　　B.F.L=0.4934　　FNo.=2　　F.A.=14°

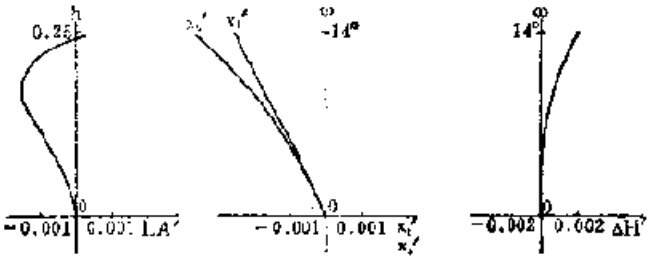


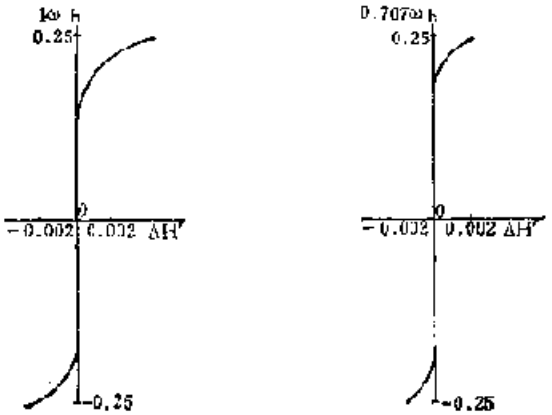
序号	r	d	n_d	ν_d	序号	r	d	n_d	ν_d
1	0.740460	0.05378	1.62041	60.29	7	0.21479	0.23122*		
2	1.70593	0.00119			8	−0.51907	0.10120	1.78472	25.51
3	0.69906	0.04167	1.62041	60.29	9	−0.45729	0.00000		
4	1.07103	0.00119			10	3.16788	0.05715	1.62041	60.29
5	0.38974	0.11906	1.69130	54.80	11	−0.66101			
6	1.27493	0.05001	1.66036	32.85					

0.23122* = 0.13000 + 0.10122

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	SI	QP(1ω)
	−0.00070	−0.00015	0.000046	−0.00070	0.0011	0.24	0.84%

h 或 ω %	LA′	ΔH′	x_t'	x_t'	$x_t'-x_s'$	$\overline{N}_{T1}'$	$\overline{N}_{T0.7}'$
100	0.00025	0.0020	0.0025	−0.0036	0.0011	0.00088	0.000073
70	−0.0015	0.00078	−0.0018	−0.0022	0.00045	0.00018	−0.000078

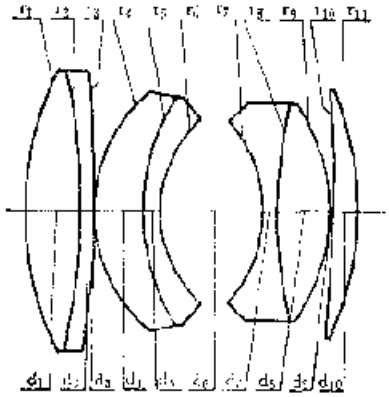




编号：02-00 082

摄　影　物　镜

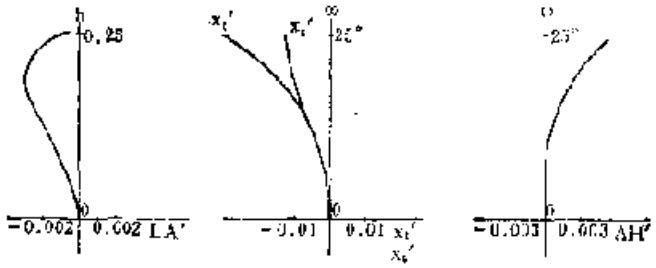
E.F.L＝1　　B.F.L＝0.684　　FNo.－2　　F.A.－±25°

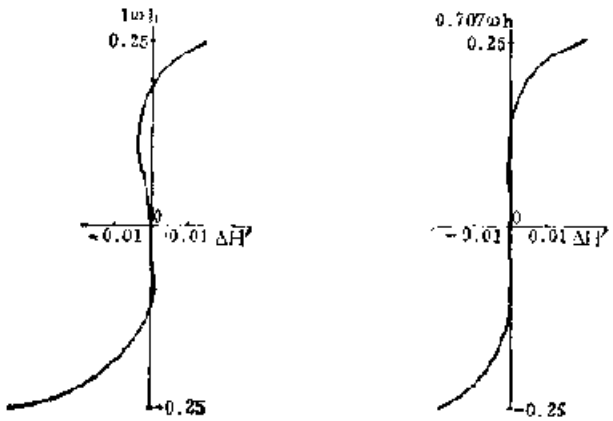


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	0.6886	0.108	1.6338	55.4	7	－0.2823	0.030	1.5673	42.8
2	1.2296	0.030	1.6727	32.2	8	0.8853	0.108	1.6204	60.3
3	－9.5650	0.002			9	－0.3787	0.002		
4	0.3325	0.098	1.6700	47.2	10	－19.5650	0.049	1.6074	58.7
5	0.4623	0.030	1.6645	35.9	11	－0.6709			
6	0.2351	0.207*							

0.207* = 0.091 + 0.116

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QP (1ω)
	－0.0912	－0.003048	0.00039	－0.0021	0.0020	0.46	1.11%
h 或 ωh_1	LA′	ΔH′	x_t'	x_s'	x_t'　x_s'	K_{FI}'	$K_{FC.T}'$
100	－0.00078	0.0052	－0.031	－0.013	－0.018	－0.0°0	－0.0044
70	－0.0036	0.0016	－0.01.	－0.0055	－0.0015	0.00.0	－0.00067

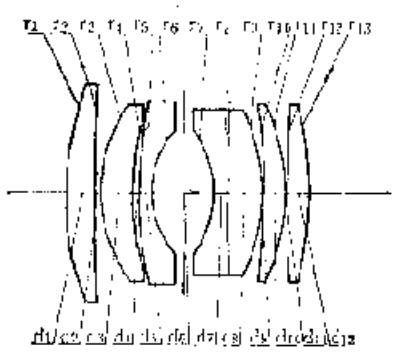




编号：02-00-083

摄　影　物　镜

E.F.L＝1　　B.F.L＝0.734　　FNo.＝1.4　　F.A.＝±20°

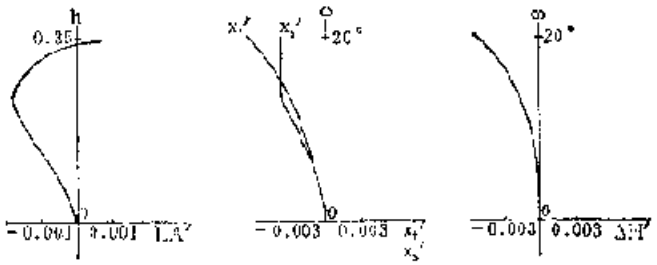


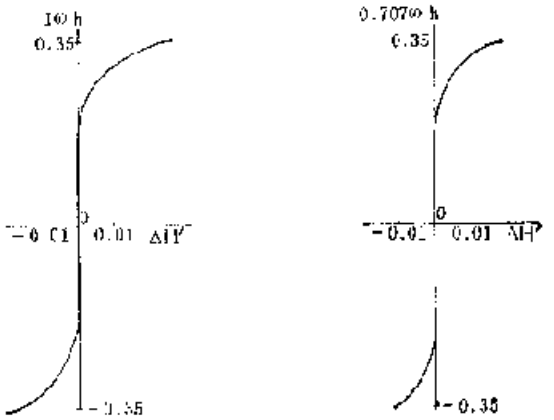
序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	1.1331	0.1048	1.81500	45.2	8	4.9204	0.1237	1.80040	42.7
2	12.0000	0.0113			9	−0.7193	0.0019		
3	0.5436	0.1312	1.69400	54.6	10	−2.5_79	0.0810	1.80040	42.7
4	1.0375	0.0160			11	−0.7526	0.0019		
5	1.6920	0.0451	1.63003	35.4	12	3.9626	0.0810	1.71615	53.7
6	0.3479	0.2280*			13	−1.2605			
7	−0.3895	0.0571	1.79180	25.9					

0.2286* = 0.1100 + 0.1186

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	CP(1ω)
	−0.0019	0.000085	0.00037	−0.0029	−0.0037	0.36	−1.57%

h 或 ω %	LA′	AH′	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.00064	−0.0057	−0.0065	−0.0039	0.0026	0.0039	0.00049
70	−0.0018	−0.0020	−0.0034	−0.0038	0.00047	0.0028	0.00048

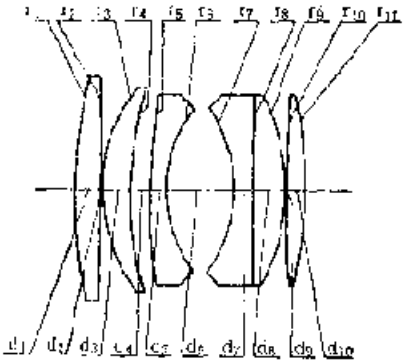




编号：02-00-084

应用高折射率玻璃的摄影物镜

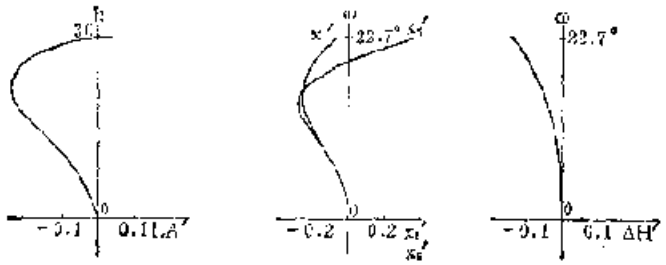
E.F.L＝100　　B.F.L＝71.48　　FNo.＝1.7　　F.A.＝±22.7°

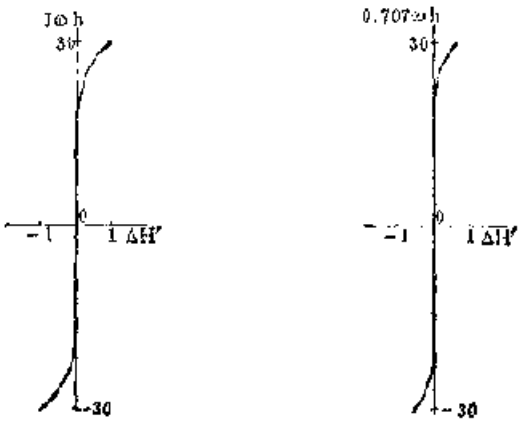


序号	r	d	n	v	序号	r	d	n	v
1	130.28	6.99	1.61600	46.8	7	−38.37	4.82	1.66680	33.1
2	−633.80	0.15			8	728.12	9.01	1.61600	46.8
3	44.89	7.98	1.61000	46.8	9	−52.83	0.19		
4	94.99	5.17			10	460.21	5.53	1.81600	46.8
5	205.55	4.78	1.72825	28.3	11	−109.11			
6	34.85	18.98*							

18.98* = 9.98 + 9.00

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	QP(f∞)
	−0.15	−0.046	0.021	−0.22	−0.038	40.97	−0.353
h 或 ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_T	$K'_{0.7}$
100	0.025	−0.14	−0.070	0.350	−0.430	−0.10	0.013
70	−0.24	0.045	−0.260	−0.268	0.0080	0.0077	−0.020

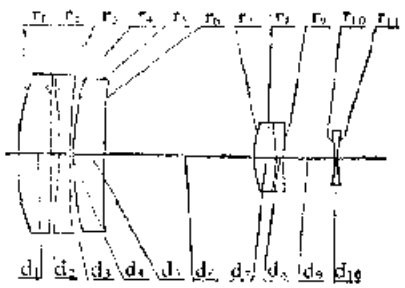




编号：02-00-085

珀 兹 伐 型 物 镜

E.F.L＝100　　B.F.L＝5.46　　FNo.＝1.7　　F.A.＝±4.58°**

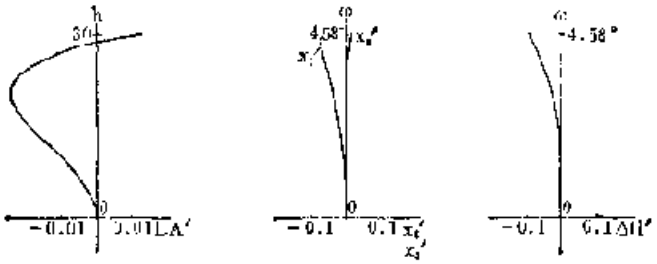


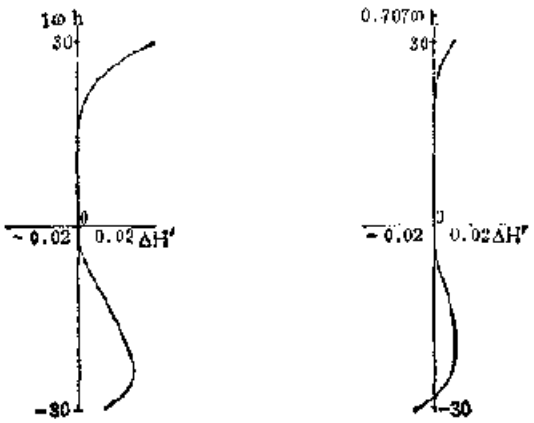
序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	100.20	13.40	1.605	60.4	7	35.65	10.30	1.625	56.6
2	4070.00	4.26			8	−57.70	2.71	1.702	38.3
3	−196.20	4.57	1.792	25.9	9	201.50	21.80		
4	496.50	1.30			10	−72.20	1.55	1.813	25.2
5	112.00	13.70	1.625	56.6	11	64.70			
6	3190.00	80.50*							

80.50* = 40.00 + 40.50

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HJ	QP(1ω)
	−0.017	−0.00022	0.0073	0.0056	−0.051	8	−1.12%

h 或 ω %	$\Delta A'$	$\Delta H'$	x_t	x_s'	x_t' x_s'	$K_{7.}'$	$K_{70.7}'$
100	0.012	−0.090	−0.082	0.0013	−0.081	0.023	0.015
70	−0.024	−0.031	−0.042	−0.0015	−0.041	0.0010	0.0028

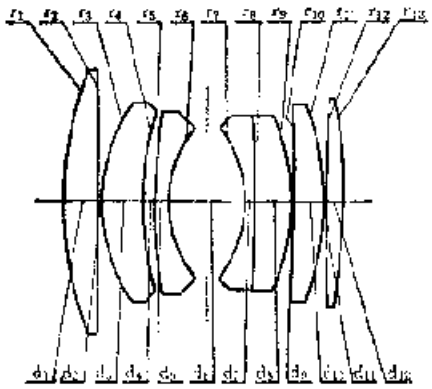




编号：02-00-086

高斯型摄影物镜

E. F. L＝1　　B. F. L＝0.6959　　FNo. ＝1.4　　F. A. ＝±24°

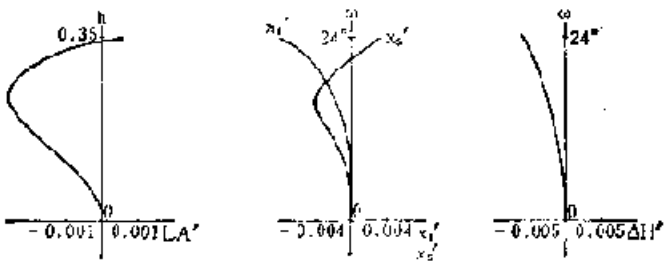


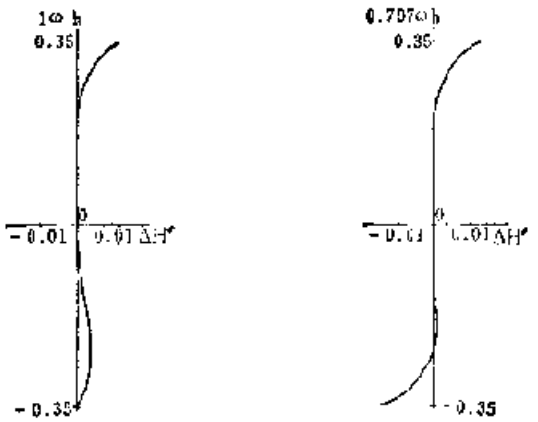
序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	1.15720	0.1044	1.72055	47.69	8	−7.84738	0.1149	1.78868	43.62
2	−76.27345	0.0019			9	−0.57576	0.0010		
3	0.81319	0.1369	1.78863	43.62	10	12.48738	0.0929	1.74795	44.49
4	0.98070	0.0306			11	−0.73012	0.0010		
5	1.75657	0.0440	1.72311	29.30	12	9.00032	0.0505	1.74795	44.49
6	0.35550	0.2346*			13	−1.73148			
7	−0.36599	0.0287	1.79180	25.90					

0.2346* = 0.1200 + 0.1146

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	OP(ω)
	0.0025	0.00042	0.0010	−0.00018	−0.0044	0.44	−1.37%

h 或 ω%	$L\Delta'$	$\Delta H'$	x_7'	x_4'	x_1' x_5'	K_{T_0}'	$K_{T_{0.7}}'$
100	0.00053	−0.0061	−0.0078	0.0031	−0.011	0.0050	0.0019
70	−0.0025	−0.0025	−0.0020	−0.0040	0.0020	−0.0019	0.00062

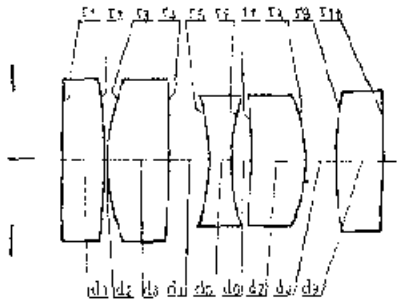




编号：02-00-087

用于摄影、电影摄影和放映的物镜

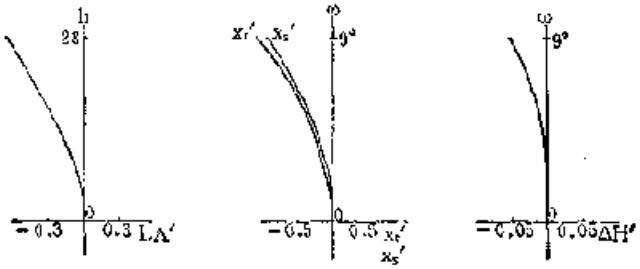
E. F. L＝100　B. F. L＝45.26　FNo. ＝1.8　F. A. ＝±9°**　L'_{p1}＝－16.9

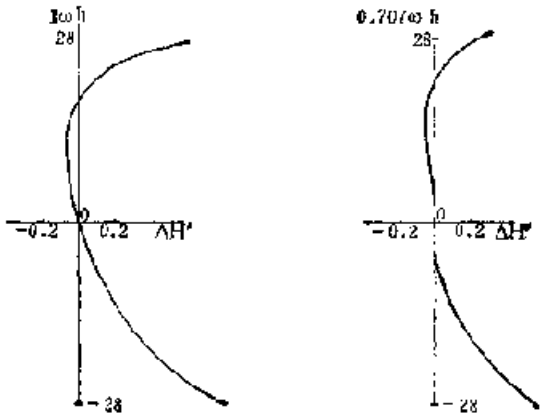


序号	r	d	n_d	ν	序号	r	d	n_d	ν
		18.0*							
1	∞	15.1	1.52	58	6	95.61	7.5		
2	230.34	1.5			7	－159.36	19.6	1.60	57
3	81.00	23.1	1.70	56	8	－ 62.21	11.7		
4	－368.11	14.6			9	129.61	17.7	1.71	54
5	－ 82.12	8.3	1.76	28	10	－301.34			

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QT(1ω)
	－0.15	0.010	0.016	0.13	0.030	16.20	0.32%

波长ω/%	LA′	ΔH′	x'_t	x'_s	x'_t　x'_s	K'_{T1}	$K'_{T0.7}$
100	－0.61	－0.052	－1.12	－0.93	－0.19	0.72	0.20
70	－0.41	－0.019	－0.57	－0.47	－0.10	0.40	0.10

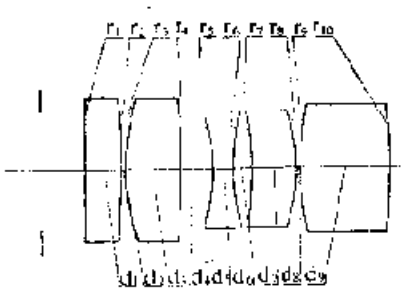




编号：02 00 088

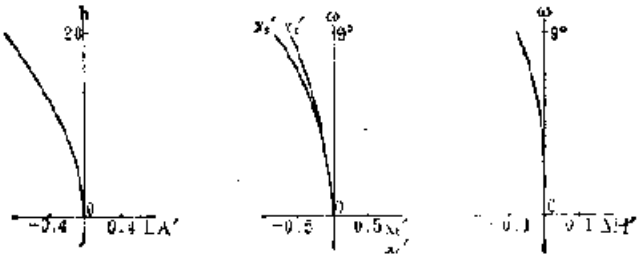
用于摄影、电影摄影和放映的物镜

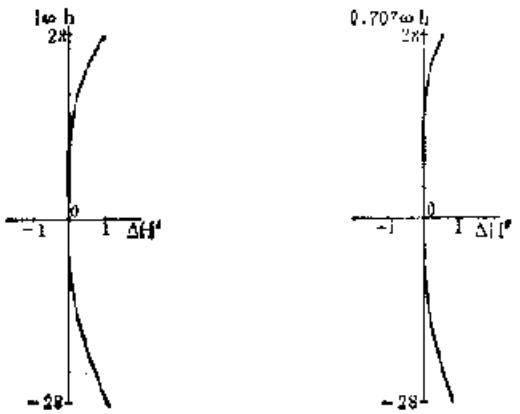
E. F. L＝100　B. F. L＝46.3　FNo. －1.8　F. A. ＝±9°**　L'_{P_1}＝－19.1



序号	r	d	n_d	v	序号	r	d	n_d	v
		19.1*							
1	∞	15.3	1.62	58	6	96.88	7.6		
2	－235.41	1.5			7	－161.47	19.9	1.66	57
3	91.72	23.7	1.70	56	8	－ 70.75	1.5		
4	－245.34	14.1			9	149.80	38.2	1.71	54
5	－ 88.21	8.4	1.76	28	10	－164.70			

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QP(1ω)
	－0.18	0.307	0.0071	－0.13	－0.043	16.25	－0.47%
h 或ω%	LA'	$\Delta lI'$	x'_t	x'_s	$x'_t - x'_s$	L'_{P_1}	$L'_{0.7}$
100	－0.82	－0.077	－0.64	0.78	0.14	1.02	0.35
70	－0.52	－0.027	－0.34	－0.39	0.05	0.63	0.21

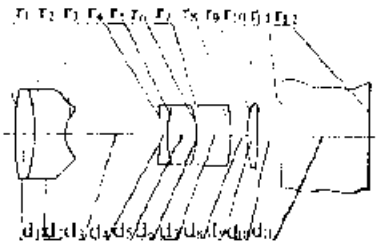




编号：C2-00-089

彩 色 摄 影 物 镜

E.F.L＝1　　B.F.L＝0.177　　FNo.＝2　　F.A.＝±4.58°**

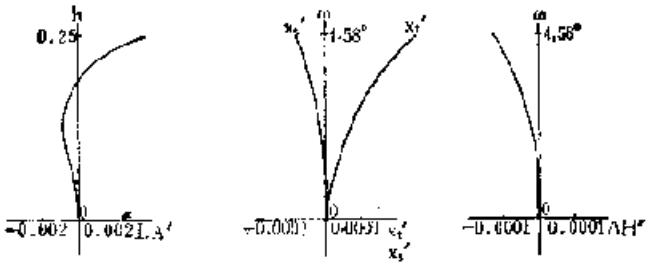


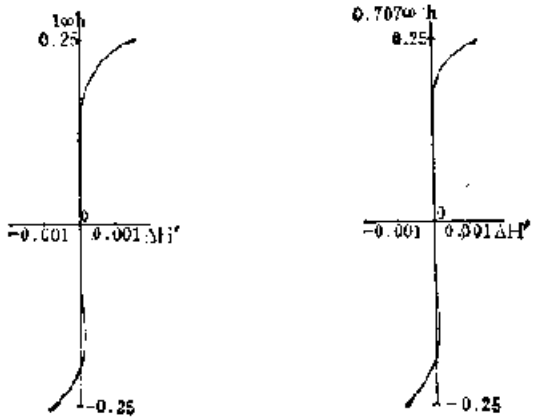
序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	4.1350	0.425	1.802	28.2	7	7.0940	0.755	1.623	60.1
2	−3.4300	0.641	1.625	56.6	8	−3.2850	0.385		
3	0.7706	2.009*			9	2.7940	0.149	1.623	60.1
4	−7.4060	0.189	1.813	25.3	10	−10.3100	0.551		
5	1.8870	0.566	1.625	57.9	11	∞	.887	1.894	54.5
6	1.8870	0.010			12	∞			

2.009* = 1.609 + 0.400

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	QF(1ω)
	−0.00058	−0.0000027	0.000022	−0.000032	−0.000009	0.08	−0.17%

h 或 ω %	T.A′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.0038	−0.00013	0.00025	−0.000084	0.00033	0.00032	0.000063
70	−0.00046	−0.000048	0.00013	−0.000041	0.00017	0.00023	0.000043

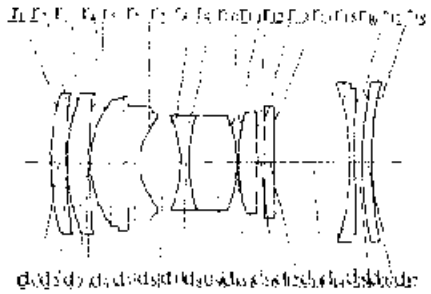




编号：02-00-090

改进的高斯型物镜

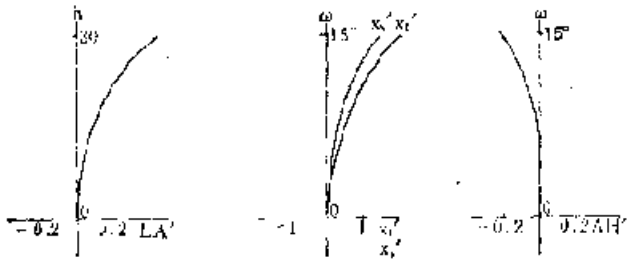
E. F. L＝101　　B. F. L＝1.04　　FNo. ＝1.7　　F. A. ＝＝15°

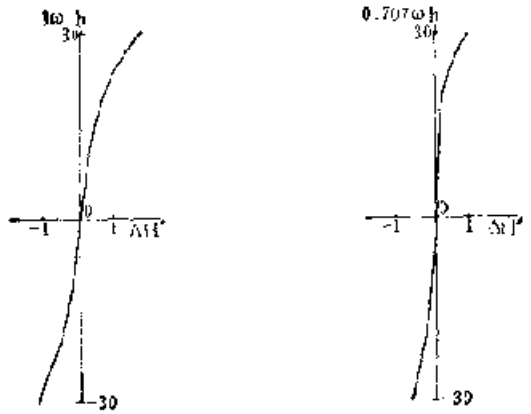


序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	98.36	6.60	1.623	60.1	10	52.61	0.09		
2	223.40	0.09			11	80.31	5.25	1.673	46.8
3	86.61	9.45	1.623	60.1	12	−818.00	3.00		
4	268.10	0.36			13	∞	4.50	1.542	89.4
5	41.82	10.00	1.694	54.5	14	∞	32.00		
6	929.50	5.55	1.813	25.3	15	−103.50	1.80	1.624	66.1
7	26.72	17.26*			16	403.70	3.00		
8	−47.48	3.75	1.678	32.0	17	185.00	4.50	1.510	60.9
9	76.08	20.86	1.694	54.5	18	180.00			

$17.26^* = 9.00 - 8.26$

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QP(1ω)
	0.044	−0.033	0.095	0.079	−0.036	27	−0.92%
h 或 ω%	LA′	AH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{T1\cdot7}'$
100	0.46	−0.24	2.04	1.49	0.55	0.20	0.0045
70	0.17	−0.064	1.04	0.61	0.43	0.16	0.0044

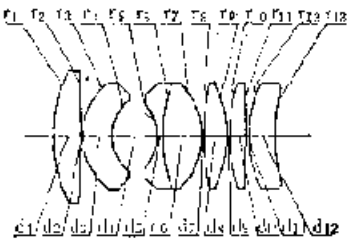




编号：02-00-091

放　映　物　镜

E.F.L=1　　B.F.L=0.5193　　FNo.=1.7**　　F.A.=±10°

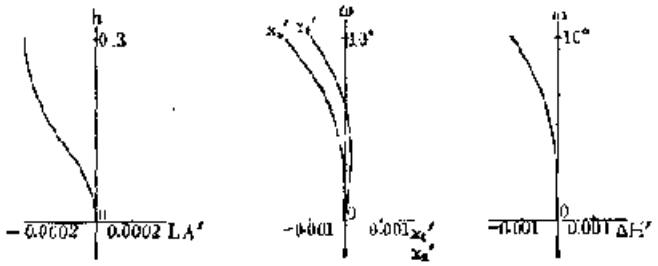


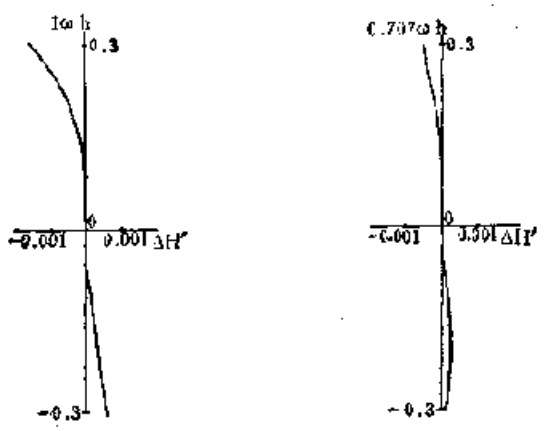
序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	1.57124	0.24880	1.64304	59.86	8	3.51792	0.21986	1.64304	59.86
2	14.72886	0.00254			9	-1.06540	0.00508		
3	0.61653	0.27369	1.81262	25.28	10	1.66467	0.15241	1.64304	59.86
4	0.33188	0.42957*			11	-30.24374	0.02540		
5	-0.43333	0.05332	1.81262	25.28	12	1.01310	0.23865	1.64304	59.86
6	1.41053	0.37321	1.64304	59.86	13	1.46232			
7	-0.71727	0.01676							

0.42957* = 0.21000 + 0.21957

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1ω)
	-0.00017	0.000039	0.00018	-0.00047	-0.00082	0.17	-0.75%

h 或 ω%	LA′	ΔH′	x_t'	x_s'	x_t'　x_s'	h'_{r_1}	$h'_{r_{0.7}}$
100	-0.00011	-0.0013	-0.0010	-0.0017	0.00071	-0.00058	-0.00017
70	-0.00035	-0.00045	-0.00011	-0.00084	0.00073	-0.00015	-0.000027

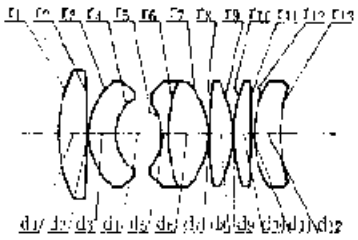




编号：02-00-092

放　映　物　镜

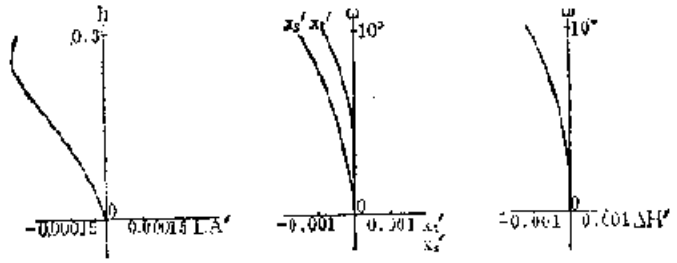
E. F. L＝1　　B. F. L＝0.5309　　FNo. ＝1.7**　　F. A. ＝±10°

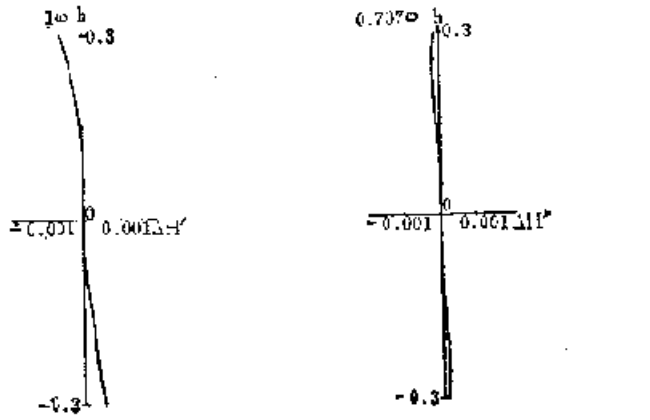


序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	1.57084	0.20813	1.64304	59.86	8	11.52931	0.24874	1.64304	59.86
2	−18.81000	0.00254			9	−0.94238	0.00508		
3	0.61638	0.27057	1.81262	25.28	10	1.65211	0.17767	1.64304	59.86
4	0.39178	0.45078*			11	−6.29956	0.00254		
5	−0.42726	0.05076	1.81262	25.28	12	0.99848	0.25296	1.64304	59.86
6	1.82705	0.33148	1.64304	59.86	13	1.29367			
7	−0.71181	0.00254							

0.45078* = 0.22000 + 0.23078

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	QP (1o)
	−0.00017	0.000024	0.00015	−0.00043	−0.00075	0.175	−0.87%
h 或 ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T1}'	$K_{T0.7}'$
100	−0.00037	−0.0011	−0.00077	−0.0010	0.00023	−0.00010	−0.000023
70	−0.00033	−0.00043	−0.00015	−0.00079	0.00064	0.0000044	0.000012

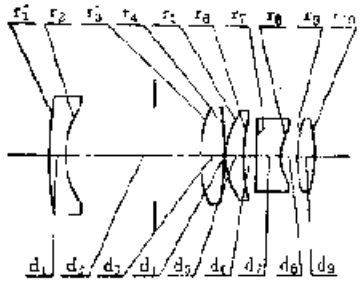




编号：C2-00-093

大孔径摄影或电影摄影物镜

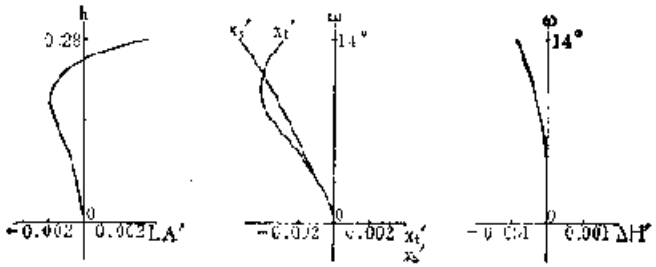
E. F. L－1　　B. F. L＝0.7577　　FNo. ＝1.8　　F. A. ＝＋14°

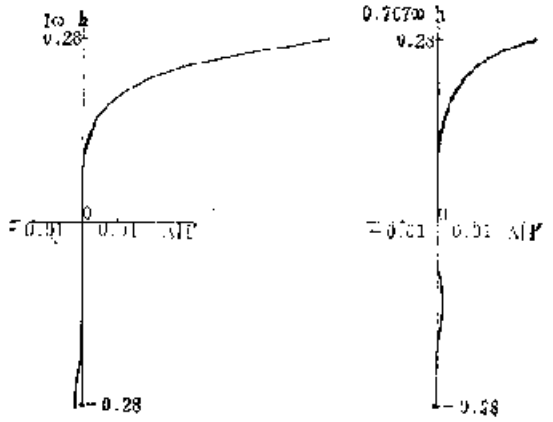


序号	r	d	n_d	ν	序号	r	d	n_d	ν
1	2.369	0.160	1.504	66.7	6	1.761	0.105		
2	0.808	1.245*			7	∞	0.216	1.785	25.7
3	1.185	0.244	1.713	53.9	8	0.449	0.160		
4	－4.521	0.014			9	0.999	0.160	1.620	60.3
5	0.707	0.146	1.713	53.9	10	－1.367			

1.245* = 1.000 + 0.245

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	QP（正弦）
	－0.0012	0.0010	0.00036	0.00094	－0.00060	0.28	－0.33%
h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K_{Tt}'	$K_{t0.7}'$
100	0.0036	－0.00083	－0.0031	－0.0053	0.0022	0.035	0.0057
70	－0.0019	－0.00034	－0.0042	－0.0034	－0.00078	0.013	0.0076

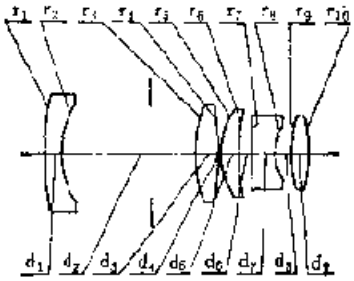




编号：02-00-094

大孔径摄影或电影摄影物镜

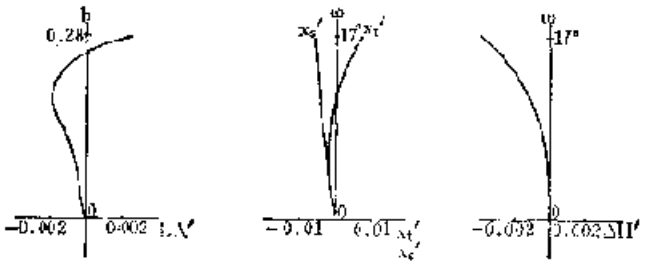
E. F. L＝1　　B. F. L＝0.80　　FNo. ＝1.8　　F. A. ＝±17°

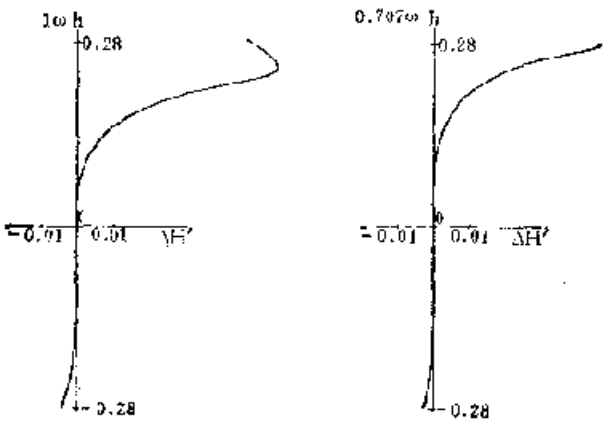


序号	r	d	n_d	v	序号	r	d	n_d	v
1	1.569	0.162	1.50466.7		6	2.920	0.116		
2	0.694	1.072*			7	−80.257	0.194	1.78525.7	
3	1.132	0.233	1.72050.3		8	0.458	0.185		
4	−8.110	0.017			9	0.916	0.152	1.62060.3	
5	0.799	0.109	1.72050.3		10	−1.175			

1.072* = 0.872 + 0.200

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	III	QP(1ω)
	−0.0010	−0.00087	0.00011	−0.0019	−0.0019	0.30	−1.28%
h或(ω)	LA′	ΔH′	x^t	x_s^t	$x_t^t - x_s^t$	K_{11}^t	$K_{10.7}^t$
100	0.0023	−0.0038	0.0078	−0.0159	0.0127	0.02	0.013
70	−0.0018	0.0012	−0.00075	−0.0045	0.0038	0.022	0.0039

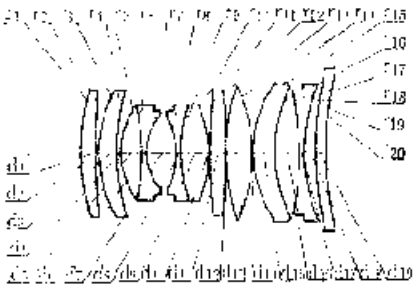




编号：02-00-095

改进的红外高斯型物镜

E. F. L＝101　　B. F. L＝0.80　　FNo. ＝1.3　　F. A. －±25°

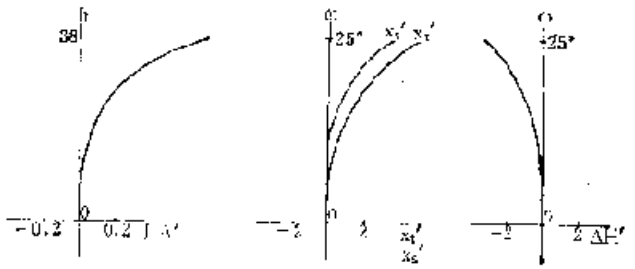


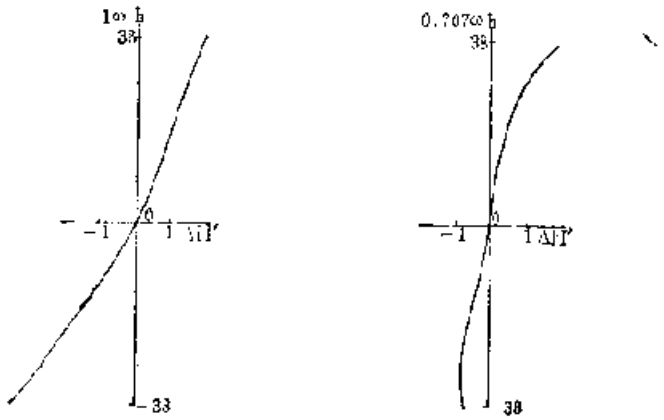
序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	166.81	12.2	1.72047.7		11	470.00	12.2	1.71653.7	
2	596.00	0.4			12	－427.60	0.4		
3	94.10	14.7	1.72047.7		13	184.10	20.4	1.71653.7	
4	188.80	0.4			14	－122.90	0.4		
5	54.46	17.1	1.70640.8		15	86.60	16.3	1.71653.7	
6	－184.90	4.1	1.81325.3		16	102.10	0.5		
7	38.62	20.6*			17	272.40	4.1	1.81325.3	
8	－69.00	4.5	1.81325.3		18	127.20	8.1		
9	116.40	19.5	1.79250.2		19	246.00	6.7	1.51263.1	
10	－90.88	0.4			20	239.40			

20.5*－6.0＝14.6

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	Π	QF(1ω)
	0.072	－0.71	0.33	－0.25	－1.93	46.35	－7.10%

h 及 ω %	$l_{\Lambda'}$	$\lambda H'$	x'_t	x'_s	$x'_t - x'_s$	K'_{T1}	$K'_{T0.7}$
100	0.72	－3.43	4.90	3.36	1.54	－0.68	－0.49
70	0.21	－1.11	1.87	0.88	0.99	0.04	0.0008

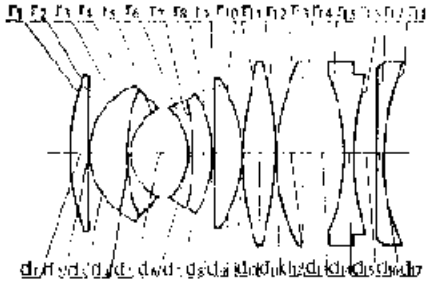




编号：02-00-096

用于夜视仪器的物镜

E. F. L＝100　　B. F. L＝0.398　　FNo.＝1.1　　F. A.＝±20°

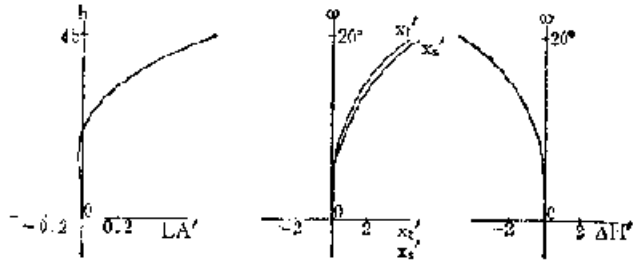


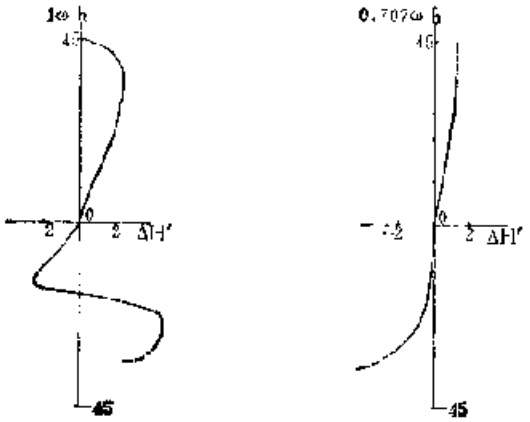
序号	r	d	n_e	ν_e	序号	r	d	n_e	ν_e
1	124.50	10.00	1.768	25.7	10	− 73.4	0.20		
2	553.00	0.20			11	170.30	17.00	1.748	44.5
3	39.44	20.80	1.885	40.8	12	− 158.80	0.20		
4	94.30	1.90	1.928	21.3	13	113.20	14.33	1.748	44.5
5	26.60	30.30*			14	− 2830.00	22.70		
6	− 31.85	1.90	1.928	21.3	15	− 114.30	4.70	1.928	21.2
7	− 118.90	11.35	1.855	23.6	16	136.80	12.60		
8	− 63.35	0.20			17	∞	3.10	1.510	51.0
9	− 775.00	15.10	1.748	44.5	18	120			

30.30* = 17.00 + 13.30

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	QΓ(1ω)
	− 0.087	0.19	− 0.26	1.60	− 3.12	35.60	− 13.48%

h或ω%	LA′	ΔH′	x_t'	x_s'	$x_t'-x_s'$	K_{T_1}'	$K_{T_{0.7}}'$
100	0.76	− 4.80	4.24	4.63	− 0.39		
70	0.18	− 1.46	1.67	2.06	− 0.39		− 0.61

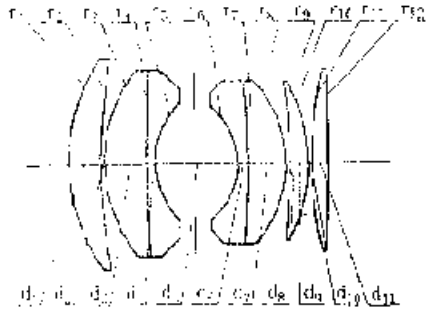




编号：02-00-097

高　斯　型　物　镜

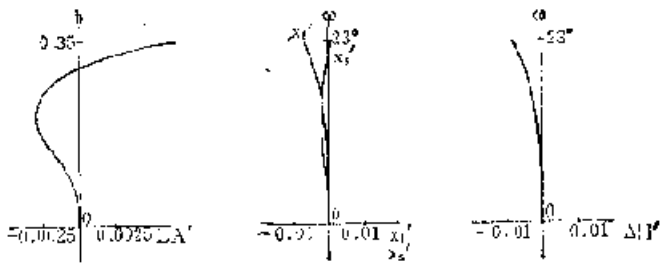
E. F. L＝1　　B. F. L＝0.75　　FNo. ＝1.4　　F. A. ＝±23°

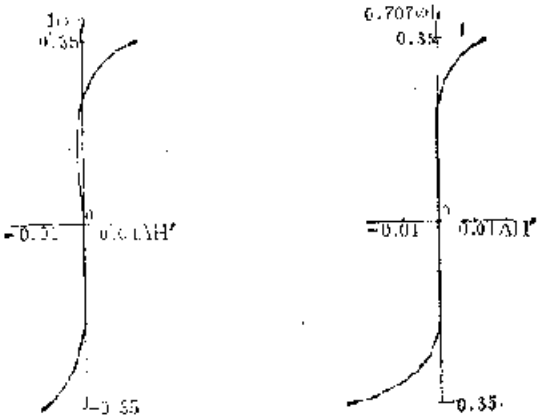


序号	r	d	n_d	v	序号	r	d	n_d	v
1	0.7655	0.1260	1.66446	35.9	7	−3.8760	0.0647	1.71300	53.9
2	2.5058	0.0010			8	−0.4535	0.0039		
3	0.5754	0.1696	1.69350	53.4	9	−2.3256	0.0833	1.67790	55.5
4	12.4041	0.0329	1.64831	33.8	10	0.6357	0.0019		
5	0.3240	0.3256*			11	1.5504	0.0620	1.71300	53.9
6	−0.2892	0.0407	1.69895	30.1	12	−16.8774			

0.3256* − 0.1600 + 0.1656

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QF(1ω)
	−0.0054	0.00012	0.00050	−0.0020	−0.0035	0.42	−2.01%
h 或 ω %	LA′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	0.0068	−0.0085	−0.0071	0.00672	−0.0078	0.0015	0.000038
70	−0.0028	−0.00030	−0.0019	−0.0015	−0.00038	−0.0060	−0.00055

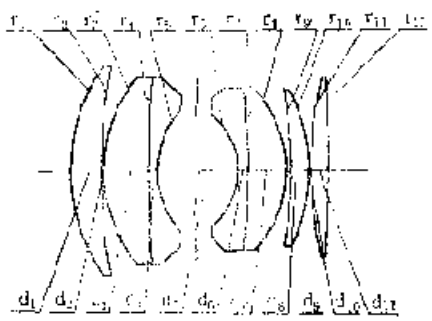




编号：02-00-098

高　斯　型　物　镜

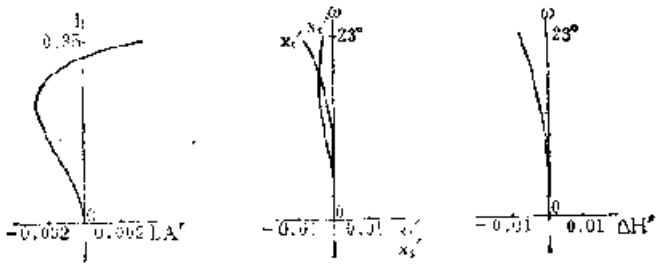
E. F. L＝1　　B. F. L＝0.7455　　FNo.＝1.4　　F. A.＝±23°

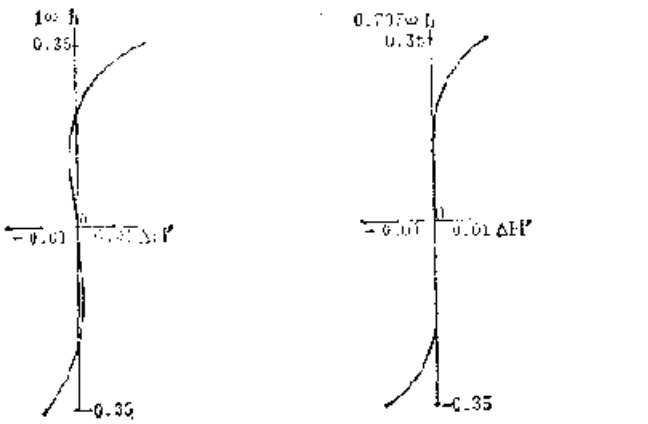


序号	r	d	n_d	ν	序号	r	d	n_d	ν
1	0.8140	0.0910	1.74950	35.3	7	−8.3727	0.1647	1.67790	55.5
2	1.6512	0.0019			8	−0.4953	0.0058		
3	0.5620	0.1202	1.74400	44.8	9	−3.2256	0.0969	1.71300	53.9
4	3.7132	0.0659	1.69895	30.1	10	−0.6610	0.0019		
5	0.3341	0.3333*			11	1.5891	0.0620	1.71300	53.9
6	0.3227	0.0465	1.71736	29.5	12	8.9028			

0.3333* = 0.1600 + 0.1733

	ΣS_I	ΣS_{II}	ΣS_{III}	ΣS_V	ΣS_{IV}	HI	Q^p (1/c)
	−0.0028	0.00021	0.00073	−0.0031	−0.0048	0.42	−1.59%
h_1 或ω%	ΔA^t	ΔH^t	x_t^t	x_s^t	$x_t^t - x_s^t$	h_1^t	$h_{1,7}^t$
100	0.0033	0.0007	0.0063	0.0031	−0.0032	0.0047	0.000047
70	0.0027	−0.0025	−0.0025	−0.0035	0.0010	0.0015	0.00002

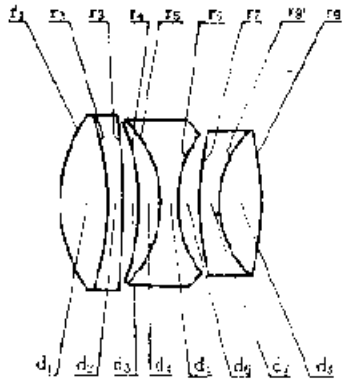




编号：02-00-099

大 孔 径 物 镜

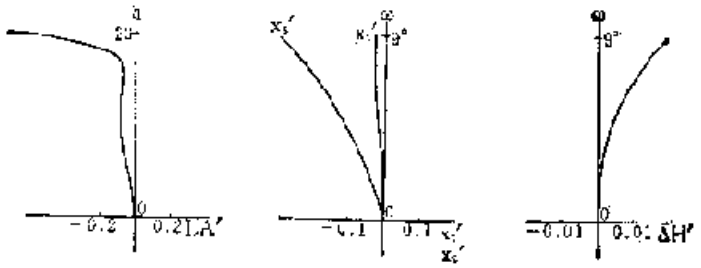
E. F. L＝100　　B. F. L＝67.81　　FNo. ＝2.5　　F. A. ＝ ±9°**

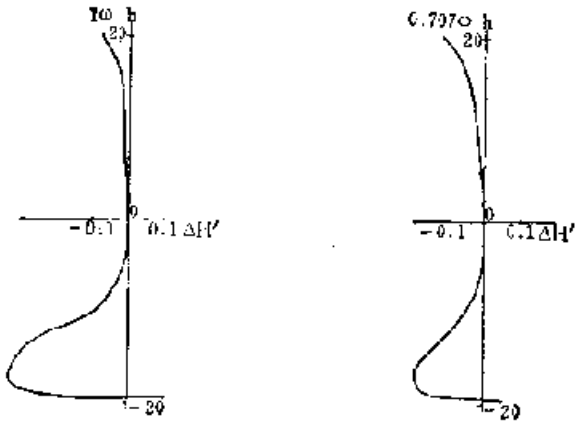


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	37.04	11.00	1.6233	58.1	6	28.96	5.62*		
2	−67.36	4.22	1.6122	37.3	7	69.82	4.68	1.5890	53.0
3	−354.50	3.60			8	22.86	10.30	1.6233	58.1
4	−61.12	5.62	1.6741	32.0	9	−88.28			
5	−27.56	3.74	1.58153	40.7					

5.62* = 3.00 + 2.62

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	H	QP(1ω)
	−0.046	−0.0048	0.011	−0.037	0.0037	16.13	0.12%
1或ω%	T.A′	ΔH′	x_1'	x_3'	$x_5'-x_5'$	K_{T1}'	$K_{T(\omega)}'$
100	−0.72	0.020	−0.028	−0.30	0.27	1.43	−0.15
70	−0.078	0.0074	0.021	−0.103	0.139	0.36	−0.093

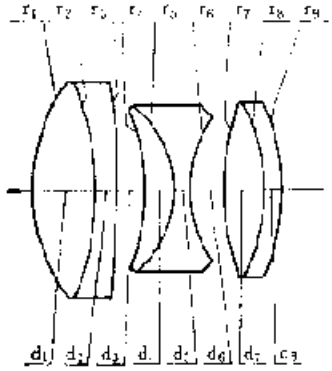




编号：02-00-100

大 孔 径 物 镜

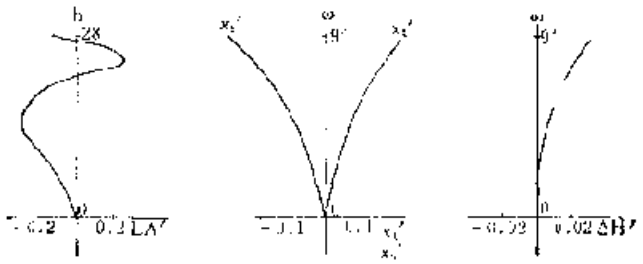
E. F. L＝100　　B. F. L＝60.44　　FNo. ＝1.8　　F. A. ＝±9°

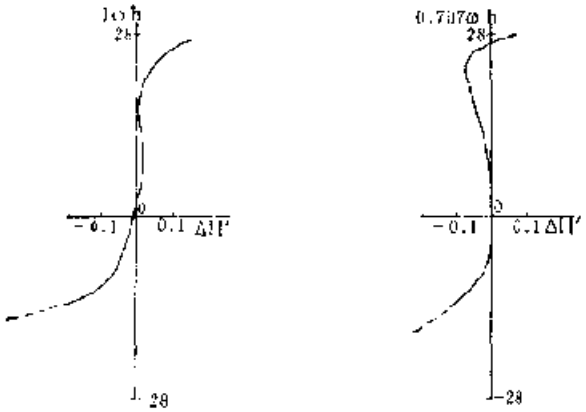


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	48.8	17.98	1.624	58.2	6	37.1	8.99*		
2	69.3	3.72	1.622	36.1	7	81.7	11.44	1.624	58.2
3	-208.4	7.85			8	-47.8	4.09	1.641	47.2
4	-53.7	3.17	1.624	58.2	9	-63.9			
5	-27.6	4.90	1.567	42.8					

8.99* = 3.00 + 5.99

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP (1ω)
	-0.30	0.0066	0.043	0.039	0.017	16.22	0.20%
h 或 ω %	LA′	AH′	x_t^*	x_s^*	$x_t^* - x_s^*$	$h\bar{r}_1$	$K_{10.7}^*$
00	-0.13	0.033	0.22	-0.27	0.49		-0.17
70	0.22	0.011	0.12	0.14	0.26		0.28

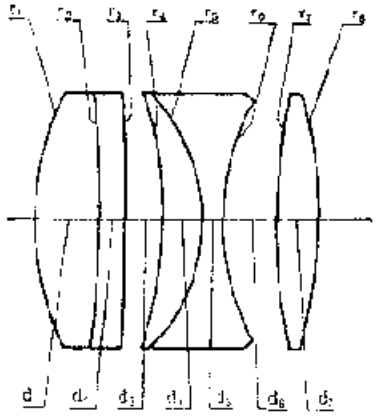




编号: 02-00-101

大 孔 径 物 镜

E. F. L=100　　B. F. L=74.92　　FNo. =2.5　　F. A. =±9°**'

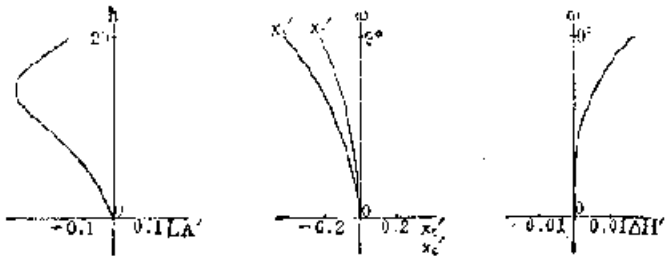


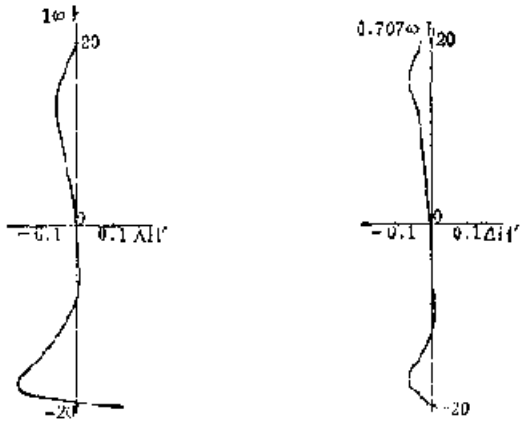
序号	r	d	n_D	v	序号	r	d	n_D	v
1	43.3	9.60	1.624	58.2	5	−27.8	3.20	1.567	42.8
2	−160.0	1.00	1.632	36.1	6	38.0	8.16*		
3	−560.0	5.84			7	95.2	6.40	1.624	58.2
4	−61.6	3.20	1.624	44.8	8	−65.4			

8.16* = 2.16 + 6.00

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(τω)
	−0.086	0.0031	0.0077	−0.015	0.7073	16.14	0.13%

h 或 ω%	LA′	ΔH′	x_1'	x_2'	$x_1'-x_2'$	K'_{T1}	$K'_{T0.7}$
100	−0.12	0.016	−0.23	−0.11	0.21	0.064	−0.061
70	0.27	0.0002	−0.139	0.23	0.10	0.0349	0.034

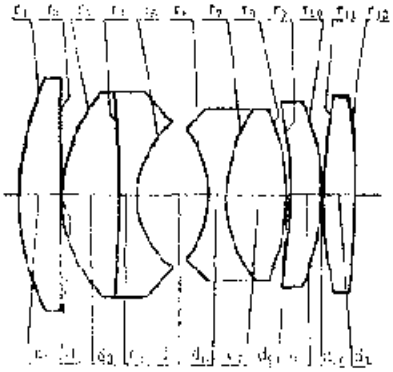




编号：02-00-102

摄　影　物　镜

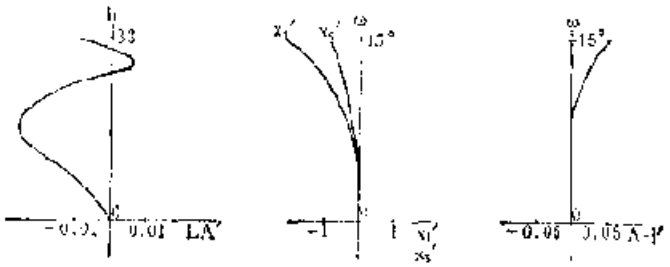
E. F. L＝100　　B. F. L＝53.65　　FNo. ＝1.5　　F. A. ＝±15°**

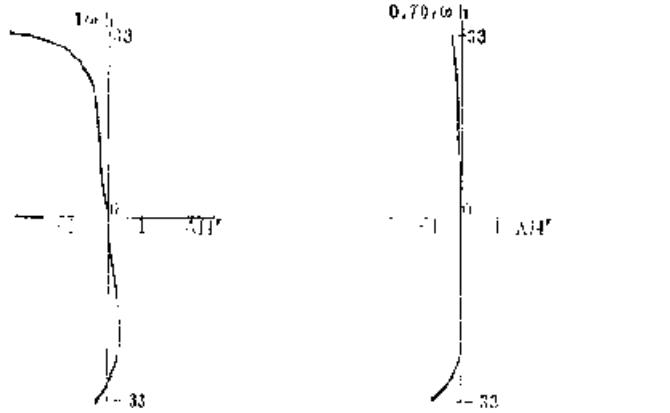


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	80.37	12.290	1.6202	60.4	7	43.50	16.930	1.6202	60.4
2	1068.56	0.378			8	− 69.91	0.378		
3	45.89	17.020	1.6202	60.4	9	− 176.80	9.455	1.6202	60.4
4	387.60	5.673	1.5814	40.8	10	71.20	0.378		
5	26.21	21.750*			11	139.9	9.455	1.6202	60.4
6	− 33.19	5.673	1.5822	42.0	12	− 191.00			

21.750* = 11.000 + 10.750

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	CH	QF (1 ω)
	− 0.043	0.025	− 0.019	− 0.17	0.014	26.60	0.13%
h (0.7 h)	LA′	AH′	x_t'	x_s'	$x_t' - x_s'$	$h_{F'}$	$f_{0.7}$
0	− 0.0005	0.050	− 2.10	− 0.87	− 1.23	− 1.61	− 0.039
7C	− 0.016	0.070	0.74	0.43	0.31	0.51	− 0.026

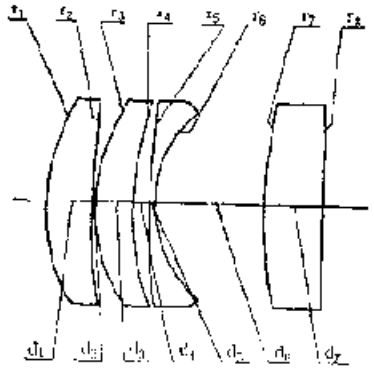




编号：02-00-103

四 组 元 物 镜

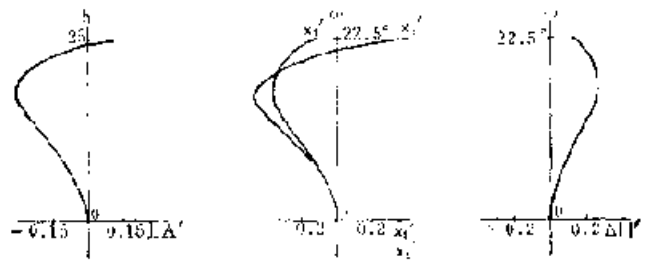
E. F. L－100　　B. F. L＝49.711　　FNo. ＝ 2　　F. A. ＝ ± 22.5'

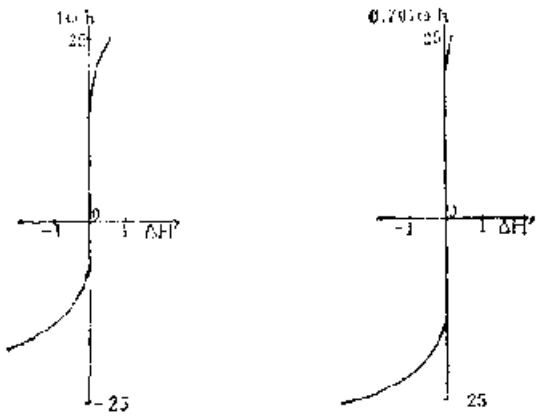


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	41.155	9.6282	1.7359	51.4	5	172.479	1.1554	1.7886	26.3
2	153.450	0.1926			6	24.533	22.4142*		
3	35.861	8.0936	1.7369	51.4	7	98.823	12.0189	1.7546	34.7
4	57.796	3.0779			8	272.074			

22.4142* = 32.4142 + 10.0000

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP'(1ω)
	－0.13	0.019	－0.3086	－0.21	0.55	41.20	0.33%
入瞳 ω%	LA'	ΔH'	x_t^*	x_s^*	$x_t^* - x_s^*$	ΔM_{T1}	$K'_{T0.7}$
100	0.10	0.13	0.97	0.38	－0.18		－1.09
70	－0.30	0.27	－0.38	－0.48	0.10	－1.33	－0.14

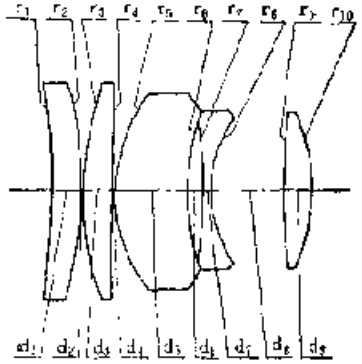




编号：02-00-104

五 片 式 物 镜

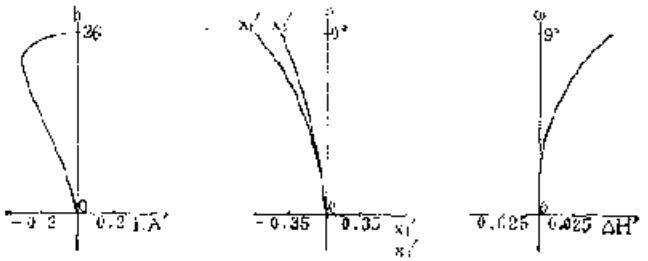
E. F. L＝100　　B. F. L＝60.1944　　FNo. ＝1.95　　F. A. ＝±9° **

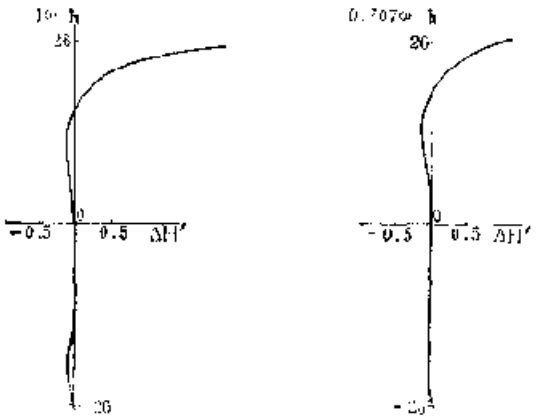


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	−179.3726	8.24519	1.6203	60.3	6	66.0858	4.75684		
2	166.1365	0.21142			7	147.2373	2.11415	1.7180	29.5
3	91.6120	8.13949	1.6203	60.3	8	34.5325	20.08444*		
4	−403.0888	0.52854			9	157.3050	8.45661	1.6203	60.3
5	44.9415	20.08444	1.6203	60.3	10	−48.4202			

20.08444* = 4.22880 + 15.85614

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP (1ω)
	−0.10	−0.085	−0.013	−0.038	0.027	16.15	0.32%
h 或 ω%	T.A′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K'_{T1}	$K'_{10,7}$
100	−0.070	0.052	−0.69	−0.48	−0.21	1.04	0.038
70	−0.28	0.018	−0.35	0.25	−0.099	0.51	−0.024

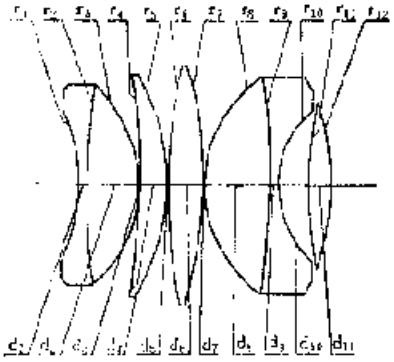




编号：02-00-105

放　　大　　镜

E. F. L＝1　B. F. L＝－0.0075　FNo. ＝0.7　F. A. ＝±30°　L_{p1}'＝－0.3201　l_j＝－∞

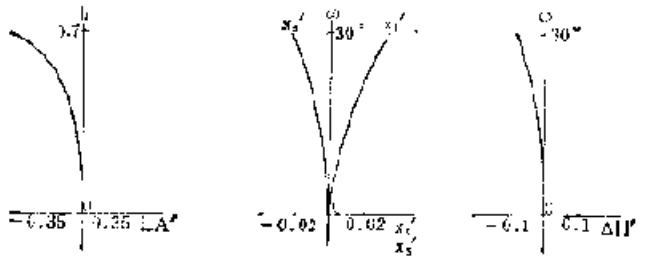


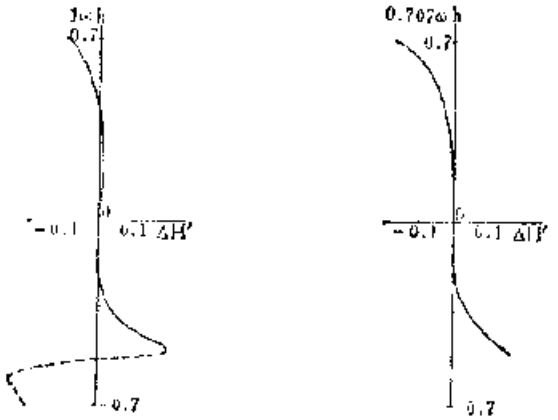
序号	r	d	n_D	ν	序号	r	d	n_D	ν
		0.3201*			7	－4.2921	0.0057		
1	－1.7541	0.0736	1.7619	25.8	8	1.3100	0.3812	1.74795	44.8
2	9.3903	0.5109	1.71616	53.8	9	－6.8029	0.0908	1.81269	25.4
3	－1.2965	0.0057			10	0.9826	0.3122		
4	－3.7268	0.2780	1.71616	53.8	11	4.3160	0.2214	1.74795	44.8
5	－2.1020	0.0057			12	－2.5137	1.1350		
6	5.7062	0.3520	1.71616	53.8					

*此系统物距。

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HJ	QP (1ω)
	0.32	0.030	0.0.1	0.063	－0.086	0.50	－12.4 %

h或ω%	LA′	ΔH′	x_1'	x_3'	x_1' x_3'	K_{11}'	$K_{0.7}'$
100	－0.70	－0.075	0.032	－0.022	0.054		0.099
70	－0.19	－0.025	0.017	－0.013	0.030		0.068



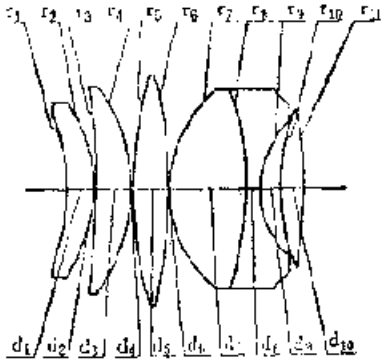


编号：02-00-106

放　　大　　镜

E. F. L＝1　　B. F. L＝－0.23　　FNo.＝0.7　　F. A.＝±30°

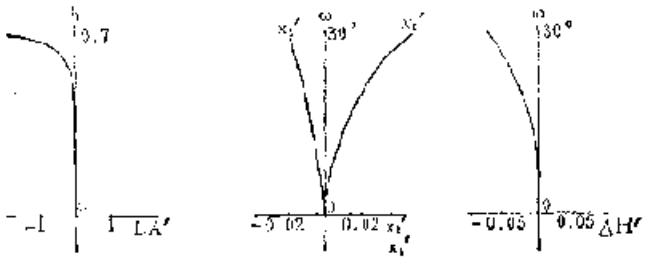
$L_{p1}'=-0.4982$　$l_1=-\infty$

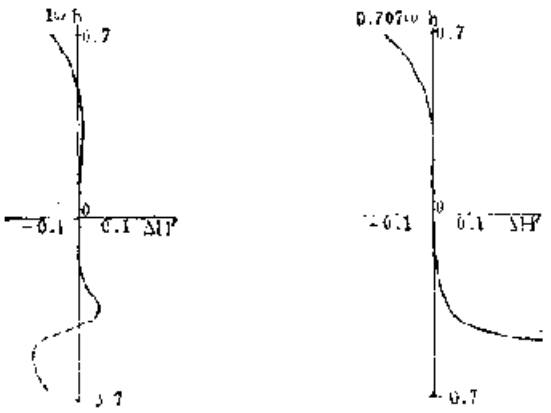


序号	r	d	n_D	ν	序号	r	d	n_D	ν
		0.1952*			6	－5.2415	0.0080		
1	－2.1522	0.3278	1.747954	44.8	7	1.4263	0.8686	1.73588	31.7
2	－1.6199	0.0048			8	－3.2218	0.1359	1.7910	25.8
3	7.4036	0.3918	1.747954	44.8	9	0.9538	0.2478		
4	1.8597	0.0080			10	2.3413	0.2718	1.71816	53.8
5	4.2053	0.3997	1.716165	53.8	11	－4.7218	1.0400		

* 此系组装距离。

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	ΣH	ΔP(ω=30°)
	0.25	0.046	0.033	－0.031	－0.004	0.57	－13.25%
h 或 ω%	LA′	ΔH′	x_1'	x_2'	$x_1'-x_2'$	K_{T_v}'	$K_{T_{0.7}}'$
100	－1.96	－0.075	0.050	－0.019	0.069		
70	－0.15	－0.035	0.023	－0.012	0.035		

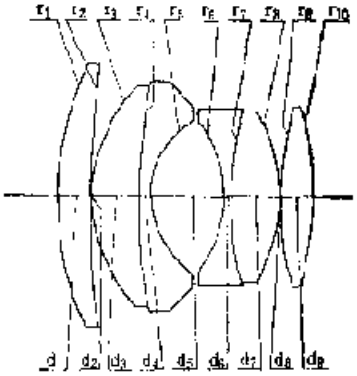




编号：02-00-107

高 斯 型 物 镜

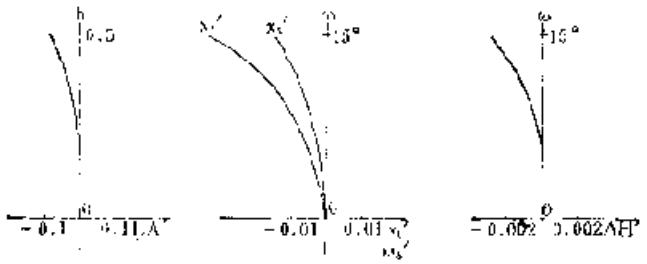
E. F. L = 1　　B. F. L = 0.5178　　FNo. = 1　　F. A. = ±15°**

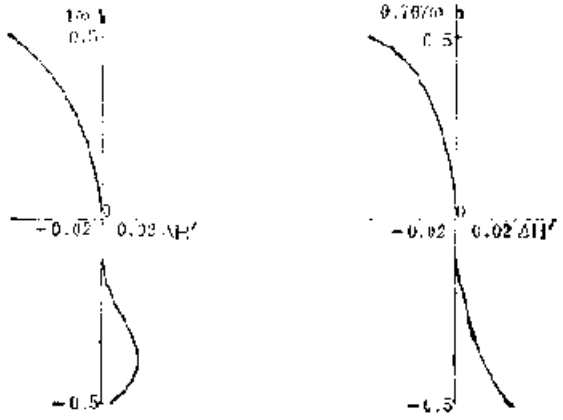


序号	r	d	n_D	v	序号	r	d	n_D	v
1	1.1500	0.1296	1.8206	45.0	6	−0.4429	0.0500	1.8427	30.0
2	4.5715	0.0006			7	1.3631	0.1785	1.9006	40.4
3	0.5664	0.2242	1.9006	40.4	8	−0.6550	0.0006		
4	2.3972	0.0412	1.7918	25.9	9	1.1652	0.1308	1.6940	54.5
5	0.3442	0.2860*			10	−1.0536			

0.2860* = 0.1460 − 0.1400

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP(1∞)
	0.030	0.0021	0.0037	−0.0045	0.0016	0.26	1.12%
1 处 ω%	LA′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
100	−0.092	−0.0029	−0.034	−0.013	−0.019	−0.022	−0.00[illegible]
0	−0.034	−0.00087	−0.0164	−0.0081	−0.0082	−0.0090	−0.00056

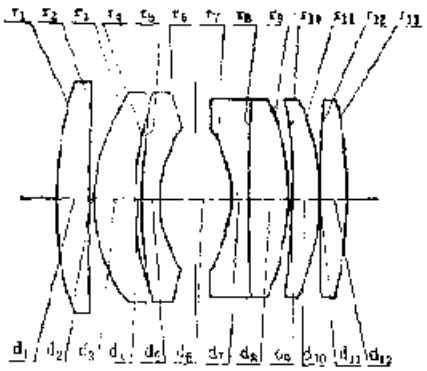




编号：02-00-108

高斯型摄影物镜

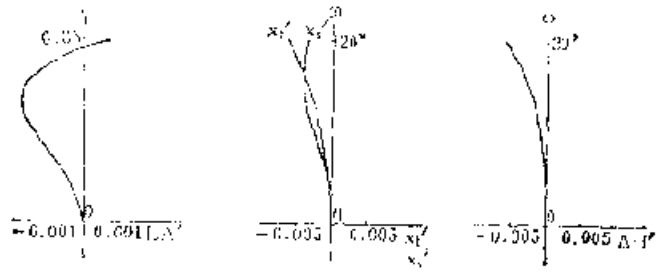
E. F. L = 1　　B. F. L = 0.733　　FNo. = 1.4　　F. A. = ±20°

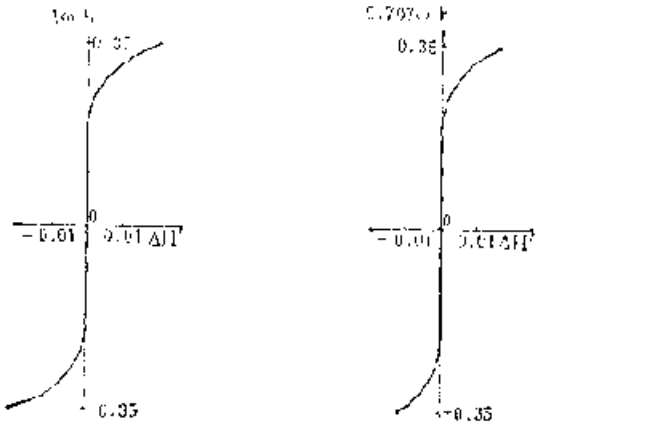


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	1.1330	0.1048	1.81600	46.6	8	4.9264	0.1237	1.80610	33.7
2	12.0000	0.0113			9	−0.7188	0.0019		
3	0.6136	0.1312	1.69400	54.6	10	−2.5179	0.0810	1.80440	39.6
4	1.0575	0.0160			11	−0.7525	0.0019		
5	1.6420	0.0451	1.63000	35.4	12	3.0626	0.0810	1.71615	53.7
6	0.5459	0.2286*			13	−1.2605			
7	−0.3695	0.0571	1.79190	25.8					

0.2283* = 0.1186 − 0.1100

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	OP (1ω)
	−0.0013	0.00010	0.00037	−0.0039	0.0036	0.30	−1.56%
h 或 ω%	LA′	ΔH′	x_t'	x_s'	$x_t' - x_s'$	K_{T1}'	$K_{T0.7}'$
全	0.00064	−0.0057	−0.0063	−0.0037	−0.0026	0.00035	−0.000038
7f	−0.0018	−0.0020	−0.0033	−0.0038	0.00047	0.0013	0.00025

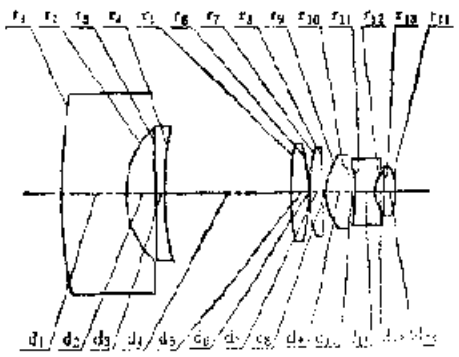




编号：02-00-109

反 远 距 型 物 镜

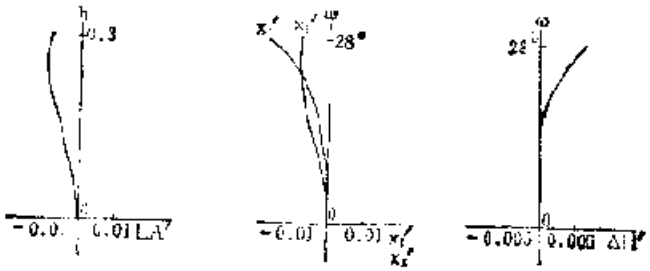
E. F. L＝1.03　　B. F. L＝0.84　　FNo. ＝1.6　　F. A. ＝±28°

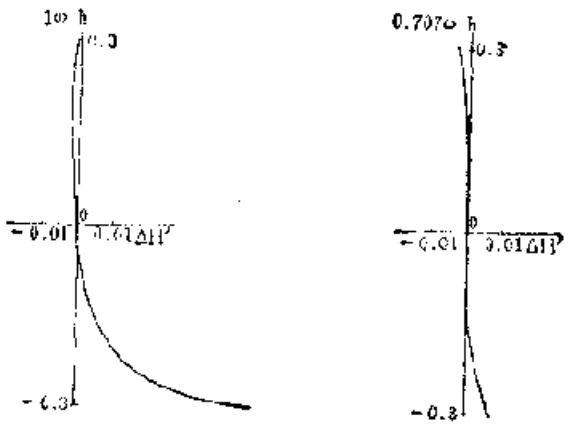


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	10.650	1.215	1.487	70.4	8	−24.784	0.015		
2	1.589	0.615			9	0.988	0.446	1.501	66.9
3	20.932	0.069	1.518	65.1	10	13.517	0.106		
4	6.461	2.415			11	−4.626	0.431	1.785	26.1
5	4.541	0.325	1.518	65.1	12	0.668	0.154*		
6	−4.542	0.015			13	2.587	0.277	1.658	57.3
7	2.543	0.262	1.620	60.3	14	−1.093			

0.154* = 0.080 + 0.074

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP (1ω)
	0.0054	−0.00030	0.00944	−0.0031	0.00072	0.84	1.11%
h 或 ω%	LA′	ΔH′	x_t'	x_s'	$x_t - x_s'$	K_T'	$K_{T0.7}$
100	−0.0088	0.0061	−0.0178	−0.0083	−0.0095	0.023	0.0349
70	−0.0079	0.0010	−0.0038	−0.0068	0.0030	0.0020	0.00027

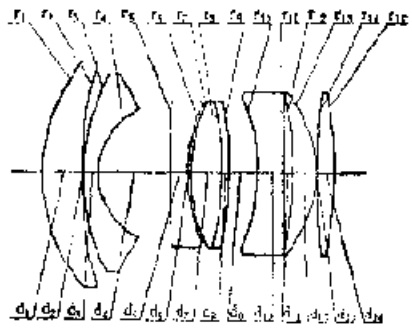




编号：02-03-110

大孔径广角摄影镜头

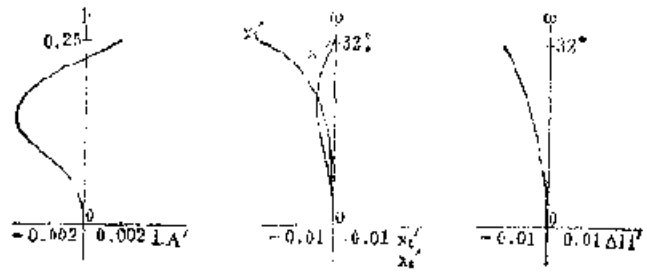
E. F. L = 1　　B. F. L = 1.138　　FNo. = 2　　F. A. = ±32°

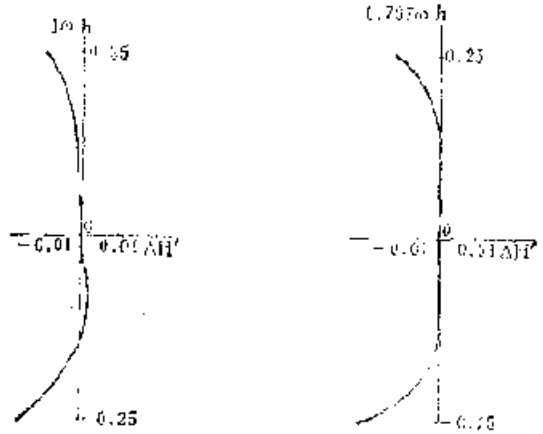


序号	r	d	n_D	v	序号	r	d	n_D	v
1	0.7781	0.1941	1.7234	37.9	9	-1.9958	0.1347*		
2	-1.9389	0.0040			10	-0.8004	0.1247	1.7174	29.5
3	1.0004	0.0639	1.5133	64.0	11	4.5543	0.0400		
4	0.3198	0.3317			12	-1.7408	0.1110	1.7292	54.6
5	8.3104	0.0833	1.8052	25.4	13	-0.5547	0.0029		
6	0.3185	0.0157			14	2.8732	0.0833	1.6968	55.6
7	0.7053	0.1441	1.8051	40.8	15	-1.6010			
8	-1.3701	0.0285	1.6900	30.1					

0.1347* = 0.0700 + 0.0647

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	OP (1ω)
	-0.0025	0.0614	0.00054	0.0026	-0.0071	0.32	-1.87%
l_1 或 ω%	LA'	ΔH'	y_t	x'_s	$x'_t - x'_s$	K_{T1}	$K'_{T0.7}$
100	0.0023	-0.012	-0.021	0.00089	-0.022	-0.013	-0.0019
70	-0.0035	-0.0035	-0.0040	-0.0054	0.0011	-0.016	-0.0014

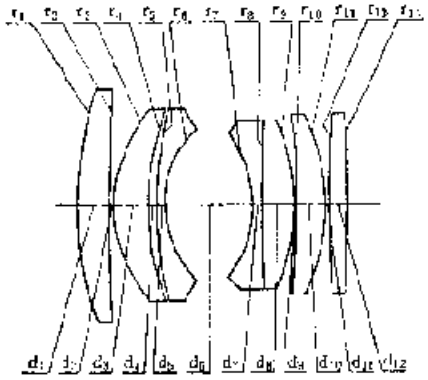




编号：02-00-111

扩展的高斯型摄影物镜

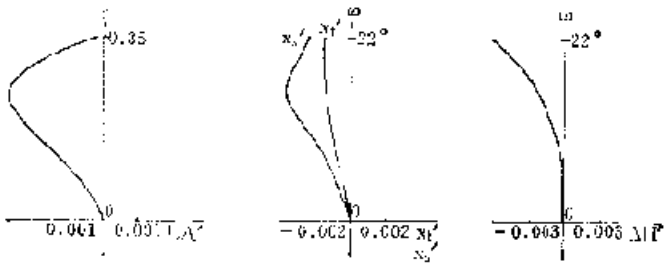
E. F. L = 1　　B. F. L = 0.69672　　FNo. = 1.4　　F. A. = ±22° **

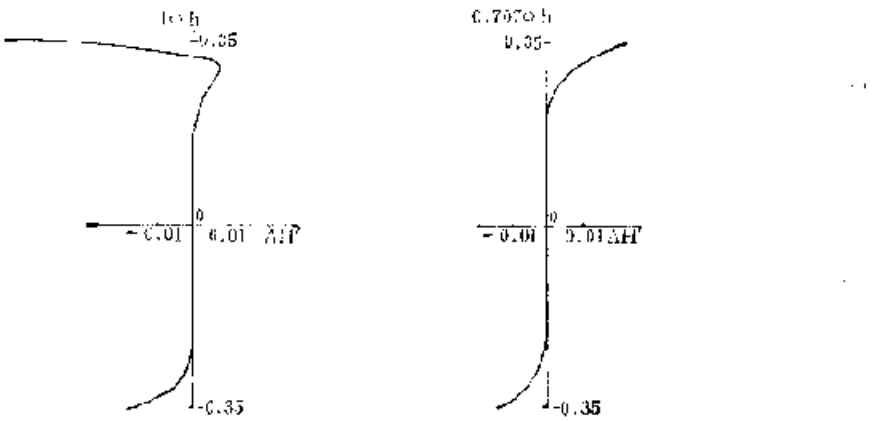


序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	1.03795	0.098094	1.71700	47.99	8	24.49210	0.101507	1.78831	47.37
2	10.42420	0.010372			9	-0.58788	0.003249		
3	0.43740	0.107949	1.78831	47.37	10	-2.77625	0.090000	1.78831	47.37
4	0.74461	0.026649			11	-0.61318	0.008258		
5	1.07497	0.024892	1.68893	31.17	12	3.50851	0.054188	1.74400	44.77
6	0.31467	0.272222*			13	-4.03355			
7	-0.35410	0.026556	1.72830	28.68					

0.272222* = 0.140000 + 0.132222

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	$Q^2(1\omega)$
	-0.0029	0.000074	0.00077	-0.0035	-0.0039	0.39	1.61%
h 或 ω%	$\Delta Y'$	$\Delta H'$	x_t'	$x_t' - x_s'$	K_{T1}		$K_{T0.7}$
100	-0.00013	-0.0064	-0.0016	-0.0024	0.00085		0.0012
70	-0.0027	-0.0023	-0.0015	-0.0037	0.0022	0.0035	0.00053

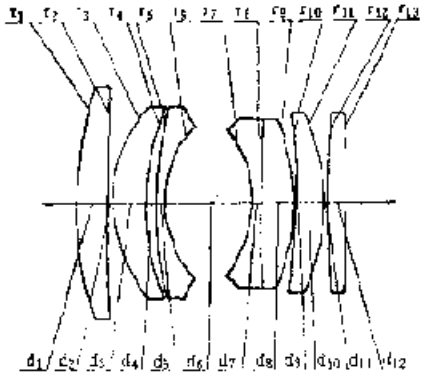




编号：02-00-112

扩展的高斯型摄影物镜

E. F. L＝1　　B. F. L＝0.70993　　FNo. ＝1.4　　F. A. ＝±22°**

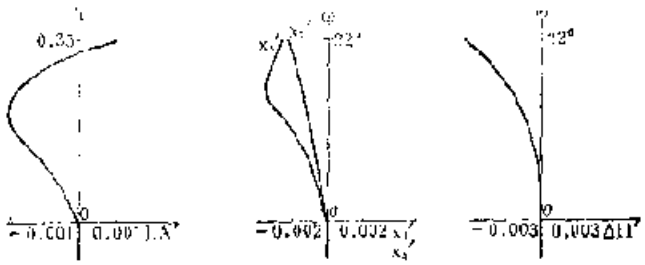


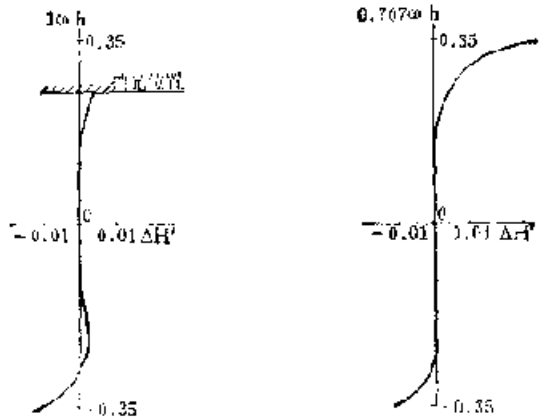
序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	0.88904	0.101821	1.71700	47.99	8	7.48043	0.102998	1.78831	47.37
2	5.77321	0.001177			9	−0.60714	0.005689		
3	0.43607	0.097113	1.78831	47.37	10	−1.74852	0.087696	1.78831	47.37
4	0.68124	0.031782			11	−0.56500	0.002550		
5	0.94172	0.032739	1.68893	31.17	12	3.29359	0.056698	1.74400	44.77
6	0.30648	0.285453*			13	−2.61618			
7	−0.34657	0.022954	1.72830	28.68					

0.285453* = 0.145453 − 0.110000

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	CP(1ω)
	−0.0025	−0.0004	0.00076	−0.0033	−0.0040	0.39	−1.64%

h 或 ω%	$L\Delta'$	$\Delta H'$	x_3^*	x_4^*	$x_4^* - x_3^*$	K_{T1}^*	$K_{T0.7}^*$
0	0.0010	−0.0063	−0.0021	−0.0025	0.00035		0.0016
70	−0.0019	−0.0025	−0.0074	0.0045	0.0071	0.0080	0.00095

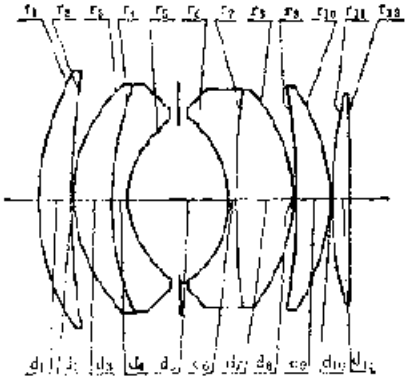




编号：02-03-113

五组七片大孔径摄影镜头

E. F. L = 1　　B. F. L = 0.6817　　FNo. = 1.1　　F. A. = ±22°

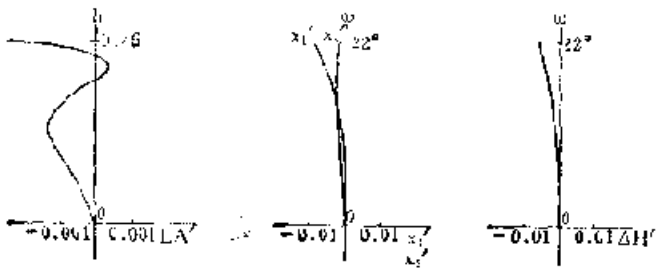


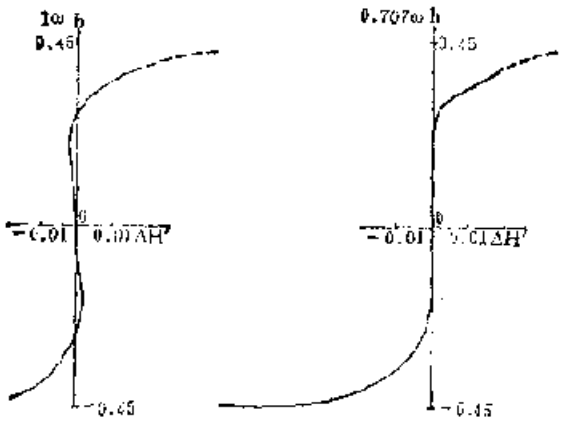
序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	0.85451	0.11203	1.80440	39.6	7	3.26154	0.19154	1.76200	40.2
2	2.61302	0.00181			8	− 0.55605	0.00181		
3	0.51629	0.19191	1.75700	47.8	9	2.71124	0.12107	1.71300	53.9
4	0.99758	0.05782	1.71736	29.5	10	− 0.66134	0.00181		
5	0.31233	0.33971*			11	1.45848	0.06324	1.77250	50.5
6	− 0.34345	0.02710	1.78472	25.8	12	− 19.87641			

0.33971* = 0.17000 − 0.16971

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HJ	QP(1ω)
	− 0.0040	− 0.00086	0.00070	− 0.0039	− 0.0054	0.39	− 1.38*2

b 或 ω%	$\Delta A'$	$\Delta H'$	x_1'	x_2'	$x_1'-x_2'$	$K_{\frac{1}{2}H'}$	$K_{\frac{1}{2}H'}'$
100	− 0.0026	− 0.0035	− 0.0085	− 0.0020	− 0.0065	0.027	− 0.00053
70	− 0.00057	− 0.0022	0.0030	− 0.0027	− 0.00027	0.028	0.000024

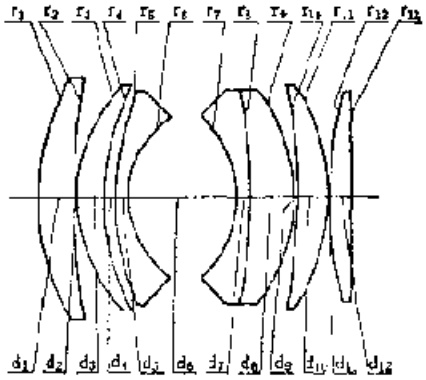




编号：02-00-114

六组元大孔径摄影镜头

E. F. L＝1　　B. F. L＝0.6899　　FNo.＝1.2　　F. A.＝±21.5°

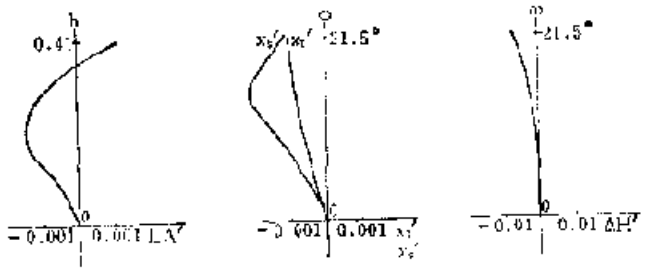


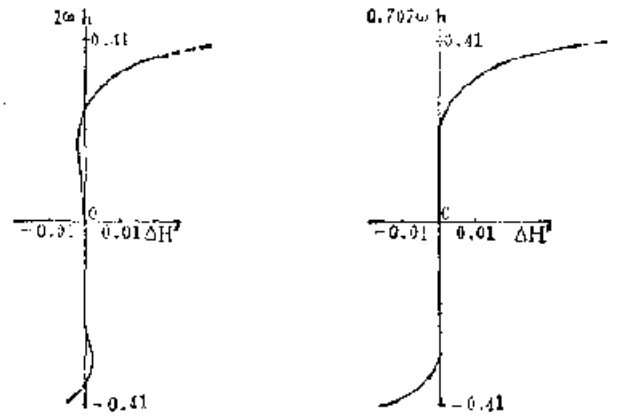
序号	r	d	n_D	ν	序号	r	d	n_D	ν
1	0.7155	0.1103	1.5030	46.6	8	−1.7781	0.1368	1.7550	52.4
2	2.5138	0.0021			9	−0.5193	0.0318		
3	0.4702	0.0890	1.806	40.8	10	−1.8394	0.1914	1.7130	53.9
4	0.7194	0.0347			11	−0.5741	0.0021		
5	0.8663	0.0320	1.7618	27.1	12	1.4655	0.0623	1.730	53.9
6	0.2057	0.3413*			13	−16.6768			
7	−0.3267	0.0320	1.7283	28.5					

0.3413* − 0.1700 + 0.1713

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	HI	QP (1ω)
	−0.0033	−0.00041	0.00084	−0.0033	−0.0050	0.38	−1.68%

h 或 θ%	$\Delta Y'$	$\Delta H^{2'}$	x_t'	x_s'	$x_m' - x_s'$	K_{T1}'	$x_{0.7}'$
100	0.0011	−0.0065	−0.0011	−0.0072	0.000075	0.027	0.0011
70	0.0011	0.0023	0.00033	−0.0028	0.0045	0.053	0.0018

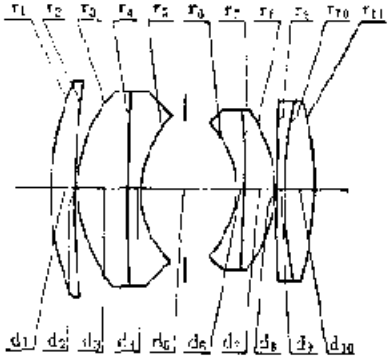




编号：02-00-115

校正了象差的照相机镜头

E. F. L－1　　B. F. L－0.69625　　FNo. ＝1.8　　F. A. ＝±23°



序号	r	d	nD	ν	序号	r	d	nD	ν
1	0.72988	0.0678	1.80610	40.8	7	－2.58920	0.0858	1.80610	40.8
2	2.53890	0.0056			8	－0.35318	0.0019		
3	0.50666	0.1441	1.58144	40.7	9	4.26850	0.0333	1.80518	25.4
4	5.98970	0.0291	1.75520	27.5	10	1.30570	0.0775	1.69680	55.6
5	0.28127	0.2685*			11	－0.90395			
6	－0.25991	0.0213	1.59270	35.4					

0.2685* = 0.1300 + 0.1385

	ΣS_1	ΣS_2	ΣS_3	ΣS_4	ΣS_5	Hi	$Q^{\rho}(1\omega)$
	－0.0018	0.00029	0.00028	－0.0022	－0.0023	0.42	－1.34%
l 或 ω%	$L\Delta'$	$\Delta H'$	x_1^t	x_s^s	$x_1^s - x_s^s$	K_{T1}^s	$K_{T0.7}^s$
100	－0.000061	－0.0056	－0.0027	－0.00086	－0.0018	－0.0050	－0.00323
70	－0.0016	－0.0017	－0.0025	0.0032	0.00355	－0.0032	0.00014